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Early Tanning and Currying
IN
New Jersey

New Jersey Agricultural Society
Trenton, New Jersey
1959

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Early Tanning and Currying
In
New Jersey

by

HARRY B. WEISS AND GRACE M. WEISS

1781 – 1940

NEW JERSEY AGRICULTURAL SOCIETY
TRENTON, NEW JERSEY
1959

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PREFACE

This is the sixth of a series of studies of early industries that flourished in rural New Jersey. The former ones are devoted to the manufacture of applejack, charcoal-burning, gristmills, fulling mills, and the woolen industry.

As in the past we continue to be indebted to various libraries and individuals for their facilities and assistance. It is therefore a pleasure to thank Donald A. Sinclair and his staff at Rutgers University Library; Princeton University Library; The Pennsylvania Historical Society; The New York Academy of Medicine; Mrs. H. B. Wolcott, Riverton, New Jersey; Elena J. Darling of the Vineland Historical Society, Vineland, New Jersey; and Helen M. Wright, Jersey City, New Jersey.

H. B. W. and G. M. W.

CHAPTER I

Ancient Tanning and Currying

The origin of the process involved in the preservation of skins is at this writing obscure. We know that it originated in the East, and that it has been practiced for ages in Europe. Previous to the weaving of cloth, the skins of animals were used as clothing. In the earliest predynastic graves, bodies have been found wrapped in skins of animals. In ancient Egypt, sheep, cattle and goats were common, and at an early time the Egyptians progressed from rawhides to skins treated so as to make them soft and pliable and finally to leather that was completely tanned. Leather was used for harness, sandals, and other purposes, and leather working is illustrated on a tomb painting of the Eighteenth Dynasty at Thebes. In Egypt and in the Middle East, oak-galls (caused by insects) were used for tanning rather than oak bark, as the galls contained a larger amount of tannin. Pliny, who died in A. D. 79, mentioned the "green gall-nuts of Aleppo" as being suited best in the preparation of leather and they were an article of commerce. During the Roman period of Egypt, other sources of tannin were the pods of *Acacia nilotica,* and the bitter rind of pomegranate *(Punica granatum)* or leather apple, although Pliny may have mistakenly ascribed the use of the rind for tanning to its use in supplying a yellow dye. A combination of alum and oil processes for sandal leather is indicated slightly in some Egyptian inscriptions. A Babylonian recipe calls for treating the skin of a kid with milk from a yellow goat, and flour, then anointing it with pure oil, then with diluted alum in grape juice and finally with the liquor of gallnuts.[1]

In the Islamic world of the tenth century A. D., there were various leather-making establishments. In Arabia there were tanneries in Harran, Jurash, Sa'ada and Zabīd; in Sijistān and Bukhàra; in Egypt, Maghrib, and Spain. According to Ibn Bādīs (1007-1061), a patron of the arts, the Yemenites used gallnuts in sweet water, and the tanners of Tā'if used salt water, probably with alum.[2]

The pelts were first cleaned and softened by soaking. Putrefaction of the epidermis made it possible to scrape it off together with the hair. Sweating of the pelts, which started bacterial action and helped in the removal of the epidermis, was an early discovery. The first use of lime to loosen the hair is unknown. It was used in the Middle Ages, and as it plumped the skins it facilitated the impregnation with tanning solutions. According to Singer, the early practices had, by the eleventh century, been developed into improved and established techniques, and up to the nineteenth century the principles of leather production had remained stationary and only a few changes in methods took place. The basic processes were chamoising with oil; the mineral (alum) process or tawing; and the vegetable process or tanning. The purpose of each method or a combination of them was the preservation of the fibrous structure of the skin and the modification of the proteins so that decay under damp conditions would not take place. Although the term tanning applies only to the process in which tannin or tannic acid is utilized, the word is always used loosely. Tawing was common in the Middle Ages. The use of alum alone produced a stiff, "empty" leather which was then softened by stretching the skin and working it with special tools.[1]

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[1] Singer, Charles, etc., *History of Technology.* Oxford, 1956.
Lucas, A. *Ancient Egyptian Materials,* New York, 1926.

[2] Levy, Martin, Miroslav Krek and Husni Haddid, Isis, 47(3): 239-243. Sept. 1956.

In the Bible, Simeon of Joppa, in whose house Peter found a temporary home, and who lived by the seaside, was a tanner. And Elijah and John the Baptist wore girdles of leather, probably rawhide.

Bone skin-scrapers showing indications of use have been found in Palaeolithic sites. The curved shapes of these scrapers indicate that they were used over a tree trunk in the same manner in which the tanner of later times removed the hair and flesh from a hide spread on a "beam."

Tanned leather was used by the Sumerians, the ancient Egyptians, the Chinese, the central Asiatics, the Greeks, Romans, etc., but its development probably extended over thousands of years before the earliest use by these peoples. Early man probably wore dried raw skins with the hair innermost. As the wearer suffered discomfort from such apparel, it is likely that animal fats were finally used to soften them. The use of smoke from a wood fire to cure the skins was a very early discovery. Alum tanning might have developed from an accidental immersion of a skin in alum-bearing water or by the use of alum in place of common salt. Vegetable tanning may have developed from the immersion of skins into bog water containing tree-bark, and its beneficial effect noted. Knowledge of the first use of these processes is lost in antiquity.[3]

The currier who took the skins from the tanyard and soaked them and stretched them and scraped off superfluous flesh, and who trampled them and subjected them to other treatments until they became soft and pliant, is another craftsman whose beginning is lost in time. When tanning was discovered, the currier no longer made leather but was concerned with treating tanned hides so that they became soft. Close relations existed between the tanner and currier. The first currier probably rubbed animal fats into hides. The earliest reference to curriers in London is 1299, according to Waterer, when curriers' prices were regulated for dressing skins.[3] Ancient paintings of Kourna Thebes show skins being curried on a slanting beam with a sharp-edged tool and the paintings and sculptures of Thebes show the figures of men engaged in currying, stretching and working skins.

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[1] *Loc. cit.*

[3] Waterer, John W. *Leather in Life, Art, and Industry.* London. [1946].

In Homer's epic poem, the Iliad, describing events at the siege of Troy, which was translated by Alexander Pope, reference is made to curriers in Book XVII, wherein the seventh battle over the body of Patroclus is described. The body is eventually secured by Menelaus, assisted by Meriones and the Ajaxes, and borne off to the ships. Beginning with line 444:

> But rounde the corse, [corpse] the heroes pant for breath,
> And thick and heavy grows the work of death:
> O'erlabour'd now, with dust, and sweat, and gore,
> Their knees, their legs, their feet are cover'd o'er;
> Drops follow drops, the clouds on clouds arise,
> And carnage clogs their hands, and darkness fills their eyes.
> As when a slaughter'd bull's yet reeking hide,
> Strain'd with full force and tugg'd from side to side,
> The brawny curriers stretch; and labour o'er
> Th' extended surface, drunk with fat and gore;
> So tugging round the corse both armies stood;
> The mangled body bath'd in sweat and blood:
> While Greeks and Ilians equal strength employ,
> Now to the ships to force it now, to Troy.[4]

Bark tanning was not known to American Indians. The sharp fore-leg bone of an animal was used by them for scraping. Hair was left on for warmth, and in the winter the hair was worn close to the body. William Byrd states that the deer skins would be stretched tightly upon sticks and dried over a fire and later dressed with fats and oils and brains and livers of animals. Sometimes they would be dried over smoke which caused them to smell so disagreeably "that a Rat must have a good Stomach to gnaw them in that condition."[5] This was written in 1728. American Indians also washed and scraped skins clean of fat and tissue and at times buried the skins so that their decomposition loosened the hair. Then they were sprinkled with powdered rotten wood to tan them. The Eskimos smoke-cure skins and chew them to make them soft, the teeth of the older women being worn down to their gums by such chewing.

Although it has been forgotten by many, that extraordinary character of the twelfth century, Robin Hood, once fought Arthur Bland, a tanner of Nottingham. Although Robin Hood was the greatest and noblest archer of England, he met his match in the shape of Arthur Bland. According to the old ballad:

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[3] *Loc. cit.*

[4] *The Iliad of Homer.* Trans. from the Greek by Alexander Pope. Edinburgh, 1792.

[5] Byrd, William. *Histories of the Dividing Line Betwixt Virginia and North Carolina.* Raleigh, 1929.

In Nottingham there lived a jolly tanner,
With a hey down, down, a down, down.
His name is Arthur-a-Bland;
There is nere a squire in Nottinghamshire
Dare bid bold Arthur stand.

As Arthur, with a long pike-staff upon his shoulder, went forth one summer morning into the "forrest of merry" Sherwood to see the red deer, he met bold Robin Hood. After some unfriendly conversation between them, during which Arthur said, "For thy sword and thy bow I care not a straw, Nor all thine arrows to boot," Robin Hood agreed to a combat with Arthur, each of them being armed with a staff of "oke graff." After more conversation,

Then Robin could no longer forbear,
He gave him such a knock.
Quickly and soon the blood came down,
Before it was ten A clock.

Then Arthur he soon recovered himself,
And gave him such a knock on the crown,
That from every side of bold Robin Hood's head,
The blood came trickling down.

After fighting "like two wild boars in a chase," and knocking each other about for more than two hours, Robin Hood called a halt because neither was getting anywhere, and asked what trade Arthur followed.

I am a tanner, bold Arthur reply'd,
In Nottingham long have I wrought;
And if thou'lt come there, I vow and swear,
I will tan thy hide for 'nought.

Robin Hood then induced Arthur to forsake the tanner's trade and join his band. So ends a "merry and pleasant song relating a gallant and fierce combat."[6]

The Tanner of Tamworth is the hero of a ballad in Percy's "Reliques" and Jack Tanner is the hero of George Bernard Shaw's comedy, "Man and Superman."

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[6] Ritson, Joseph. *Robin Hood: a Collection of all the ancient Poems, Songs, and Ballads now extant relating to that celebrated English Outlaw.* London, 1832.

CHAPTER II

Some Early Tanners of New Jersey

The tanning of hides was a trade that began shortly after the arrival of the early settlers in New Jersey. In the "Calendar of New Jersey Records, 1664-1703,"[1] various tanners are mentioned in connection with real estate transfers. Some of these are John Ogden, Elizabeth, 1664; John Eldredge, Salem, 1675-1678, who with Edmund Warner were two persons to whom Fenwick leased his interest in West Jersey as security for money borrowed from them; Richard Hunter and Joseph Sleigh, both of Dublin, 1677, who were among the proprietors of the 100 shares of West Jersey; Tho. Williams, North Branch of Pennsauken Creek, West Jersey, 1684; Thomas Hutchinson of Beverly, York, and Mahlon Stacy of Hanworth, York, both among the proprietors of the 100 shares of West Jersey, and both of whom deeded land to others in 1687; David Smith, Elizabeth Town, 1689; John Ireson (Irons), Salem Town, 1689; Robert Stacy, tanner to Richard Bassnett of Burlington, 1689-90; Tho. Lambert, Nottingham, Burlington County, 1690; Wm. Tyler, Salem Creek, 1692; Peter Fretwell, tanner to Daniel England, both of Burlington, 1693-4; John Hutchinson, Hutchinson's Manor, Burlington County, 1695; and Wm. Ellison, Woodbridge, East Jersey, 1695-6. It is not known if all these tanners practiced their trade.

Tanners within the Province of New Jersey were prohibited by an act of the General Assembly of April 6, 1676 from making or selling any leather that was not passed by a "Sealer's hand and Approbation." In every town where tanners were active the sealers were appointed by the Freeholders. In order to encourage the tanning of skins the tanner in each town had the liberty to fell trees, upon the commons, for bark. For every hide that was sealed, the sealer collected four pence. If a tanner was found to be making or selling leather that could not be passed by the sealer and that had been marked as such, he forfeited the merchandise to the use of the public. In 1678 the General Assembly of East Jersey prohibited the sale or transportation of green or dry hides or any tanned leather out of the Province under the penalty of forfeiture. One-third went to the informer and two-thirds to the public use. An act of November, 1679 prohibited Indian tanned skins from being transported out of the Province by either inhabitants or foreigners.

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[1] *New Jersey Archives,* 1st Ser., Vol. XXI.

On account of abuses in the tanning of hides, the General Assembly of West Jersey in 1683 prohibited anyone from selling leather that was not well tanned under penalty of forfeiture of the leather and its disposal for the use of the Province. The Court appointed officers for regulating weights and measures and for searching out leather. The sealer received 18 pence "by the Dicker" (10 hides to a dicker). For a breach of trust, the sealer could be fined 10 shillings. According to the "Records of the Town of Newark, 1666 to 1836,"[2] the sealers of leather were Richard Lawrence, 1676; John Curtis, 1676, 1679, 1680; and John Baldwin, Sr., 1676, 1679, 1680.

Thomas Budd in 1685 wrote of New Jersey that "The Tanning Trade and Shoemaking may be here managed to good advantage, Hides being plenty, and to be had at moderate Prices, and Bark to be had for only the charge in getting it. A Skinner that can dress Skins in Oyl, may do very well; for we have Elk skins, and plenty of Buck and Doe skins, which the Inhabitants give (at New York, where there are such trades) one half for dressing the other."[3]

In Philadelphia at this time (1683), Penn and the Free Society of Traders established a tannery that was well supplied with hides and bark. As an article of clothing, leather was in general use. In 1695 in Philadelphia, dressed and undressed deer skins were not allowed to be exported in order to promote their use at home. Raw hides cost 1½ pennies per pound. Leather sold for 12 pence per pound. The butcher paid 3 pounds for a fat cow and sold the beef for from 3 to 4½ pence per pound. Curriers paid 20 pence for a gallon of oil and received 3 shillings 4 pence a hide for dressing it.

In 1664 in Elizabeth, the family of John Ogden, which came from Long Island, established a tannery. The same business was followed by descendants of this family, who also supplied trained tanners to other colonies. Although the exact location of the Ogden tanneries is not known, they were supposed to have been some distance from Elizabeth proper, on the Newark side. The Ogden descendants ran tanneries long after the end of the Revolutionary War. In 1760 David Ball and Matthias Swain of nearby Springfield advertised choice deer skins for sale.[4] In Newark, at the invitation of the town fathers, Samuel Whitehead, of Elizabeth, settled in 1680 where he was supposed to supply the inhabitants with shoes. And according to the minutes of the Town Meeting of Newark on January 1, 1697-8, a committee was appointed to decide whether Azariah Crane could have land for a tanyard, out of the commons. Newark by 1860 had 30 tanneries which employed more than 1,000 workers. Another early tanner was Stephen Bassett, who came from New York about 1724 and settled in what is now Passaic. Attracted by low prices for which Indians sold their skins, and by an abundance of bark, lime and salt used in tanning, Bassett became the first manufacturer of leather in Bergen County.[5]

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[2] Coll, N. J. Hist. Soc., Vol. VI.
[3] Budd, Thomas. *Good Order Established in Pennsilvania & New Jersey.* Phila., 1685.
[4] Johnson, Arthur L. Proc. Union Co. Hist. Soc. 1921-1923.

Rolla Milton Tryon, who made a study of the clothing worn by runaway servants and slaves in New Jersey from 1704 to 1779, found that a substantial number of servants and slaves wore buckskin, bearskin, and leather. During colonial times, household manufacturing was dominant. Weavers and tailors went from home to home. After cows and calves were killed for meat, the hides were sent to a tanner and the leather that was returned was made into shoes for the family by an itinerant shoemaker.[6]

Henry Guest, a tanner of New Brunswick, New Jersey, wrote a letter on September 28, 1767 to "The New York Mercury," which published it in the issue of October 12. In this letter Mr. Guest suggested the use of sole leather, instead of copper, as roofing material, claiming that if properly "managed" it would last for centuries, and would resist rain and fire. He advocated that it be given a trial for church steeples.

Schmidt in his account of the Case tannery near Flemington, which operated from 1783 to 1851, mentions that hides and skins of cattle, calves, horses, sheep, hogs and dogs were tanned and that in addition to the bark that was obtained from their own woodlot, the Cases purchased the bark of red, white, black, pin, Spanish, and chestnut oak as well as the bark of beech, birch and hemlock trees. Willow was sometimes used to tan sheepskins. The lime that was needed was hauled in by wagon from New Brunswick and later from nearby kilns. As the local supply of hides after 1800 was inadequate, the Cases bought through agents in New York City and also from New Orleans, Caracas, Pernambuco, Buenos Aires and other places. The tanned leather was sold locally and through agents in New York. The hair from the hides was sold for use in preparing plaster mortar. In Hunterdon County by 1840, there were 23 tanneries in operation, with a total of 82 men on the payrolls. A few farmers did their own tanning. By 1860 there were only 7 tanneries employing 14 workers. The supply of bark had declined and larger tanneries elsewhere had taken over their markets.[7]

During the Revolutionary War, General Anthony Wayne, a former tanner and farmer from Pennsylvania, headed an expedition to a blockhouse, occupied by Tories, that was located on a high point above a ravine that extended back from the river on the north side of Guttenberg in Bergen County. High rocks on both sides protected it and in addition to destroying the blockhouse Wayne was supposed to bring off a number of cattle on Bergen Neck which were exposed to the enemy. The expedition was not successful. Wayne lost 15 men and 15 were wounded. However, the cattle were driven off as planned. Major André, later executed as a spy, ridiculed Wayne's failure in a poem entitled "The Cow Chase in Three Cantos," which was printed in "Rivington's Gazette," August 16, 30, and September 23, 1780. It was a model of "Chevy Chase" and its first two stanzas follow. The three cantos consist of seventy-one stanzas.

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[5] Federal Writers Project. *Stories of New Jersey.* New York, 1938.

[6] Tryon, Rolla Milton. *Household Manufactures in the United States, 1640-1860.* Chicago, 1917.

[7] Schmidt, Hubert G. *An Economic History of Hunterdon County, New Jersey.* New Brunswick, 1946.

> To drive the Kine one summer's morn,
> The Tanner took his way,
> The Calf shall rue that is unborn,
> The jumbling of that day.
>
> And Wayne descending Steers shall know,
> And tauntingly deride,
> And call to mind in every Low,
> The tanning of his hide.

The tanners of New Jersey, New York, and Pennsylvania petitioned Congress in 1792 praying for relief from the inconveniences suffered by the erection of mills to grind tanner's bark for exportation. It appeared that a patent had been granted to someone in England for dyeing and tanning and that his agents in the different states were paying for shaved bark from 10 to 13 dollars per cord. These prices, representing an increase from the usual 3 to 4½ dollars per cord, were bound to injure or prevent the manufacture of leather in the United States. The export of ground oak bark for the year ending September 30 was 2,921 hogsheads as compared with 1,040 hogsheads during the previous year. A committee, as a result of the petition, recommended an increase of the duties on leather and shoes.[8] In 1794 rawhides and skins were admitted free of duty, and large amounts of oak bark continued to be exported. From October 1, 1792 to September 30, 1793, there were exported from the United States 3,108 hogsheads of oak bark, 208 gallons of essence of oak bark, 444 cords of oak bark, 978 hides, 17,301 pounds of leather, 426,318 pounds of skins and furs, and 27,446 skins.

The idea of the modern housing development with its hundreds of dwellings being erected over a comparatively short period of time is not new in this country except in practice. Tench Coxe in 1794 published a plan for encouraging agriculture by the creation of a town along a river. The money necessary, $500,000, was to be raised by a lottery or by 5,000 subscriptions of $100 each. Land was to be purchased; 510 stone and brick houses were to be erected at a cost of $300 each; 220 stone and brick houses at a cost of $500 each; there were to be built rolling, grist, hemp, flax and paper mills; also potteries, snuff factories, bakehouses, blacksmiths' shops, hatters' shops, taverns; a church, schoolhouses, a library, etc. And the plan included two tanyards at a cost of $1,500 each.[9]

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[8] Bishop, J. Leander, *History of American Manufactures.* Phila., 1868.

During early colonial times about the first 10 or 12 years of a settler's life were concerned with supplying food, clothing and shelter for his family. Every farm was a little world of its own, with the occupant being his own carpenter, tanner, harnessmaker, brewer, distiller, shoemaker, blacksmith, tailor and hatter, in addition to being a farmer. As the villages increased in size, they too became self-sufficient, economic units to a large extent. In 1768 in Lancaster, Pennsylvania, out of a total of 700 families there were 234 manufacturers. These included 14 hatters, 36 shoemakers, 4 tanners, 3 skin dressers, 17 saddlers, 25 tailors, 25 weavers of cotton, woolen and linen cloth, 3 stocking weavers, 25 white- and blacksmiths, 6 wheelwrights, 11 coopers, 6 clock- and watchmakers, 6 tobacco and snuff manufacturers, 4 dyers, 7 gunsmiths, 5 ropemakers, 4 tinners, 2 brass founders, 1 brushmaker, 7 turners, 7 nailmakers, 5 silversmiths, 3 potters, 2 brewers, 3 coppersmiths, and 2 printers. These artisans all took farm produce in exchange for their goods and services.[9]

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[9] Coxe, Tench. *A View of the United States of America.* Philadelphia, 1794.

CHAPTER III

Early Tanning Practices

Many pioneer settlers did their own tanning and currying. In tl fall after a steer or cow had been killed for the family's supply winter meat, the hide along with the skins of wild animals were soake in lye made from wood ashes to loosen the hair, which was the scraped off. Sheepskins were left with the wool unpulled and we worn next to the body.[1] The hides were soaked in a strong decoctic of tannin made from oak or hemlock bark. This was done in a larg wooden vat or trough sunk in the ground. After the required time fc soaking, the skins and hides were dried, scraped and made soft t pounding them on a block of wood with a mallet. Then they wer scraped with a draw-knife. Tallow or bear grease was rubbed in ar if desired the leather was made dark and polished by applying to tl grain or hair side a mixture of soot and lard.[2] Finally the members the farm family had their shoes and boots, and harness for the horse Tanning and currying on such a small scale was a seasonal activit and it was carried on in connection with farming.

As the community grew, tanning gradually became concentrated i the hands of a few individuals who did the tanning for the farmers o shares. In late fall or early winter, after butchering was finished, tl tanner with a supply of hides and skins commenced his activities. Tl final product or leather was usually divided equally between the tanne and farmer. After a supply had been built up in the tanner's hands l could sell it for cash.[1] Many small tanneries were scattered over Ne Jersey, the early ones being very primitive and the proprietor, as rule, performing all the operations of tanning and currying, and sometimes shoemaking. It was not until around 1800 that the tannin process was understood. The smell of a tannery was not an agreeabl one. New York in 1674 made four tanners move beyond the city wal and Philadelphia in 1739 ordered six tanners to move beyond th town.[3]

Before outlining the early methods of tanning, it should be state that skin consists of three distinct layers. There is first the outsid layer of epithelial cells or epidermis, or scarfskin, consisting of dea cells as they are pushed to the surface and a malpighian layer containing pigmentation. The second layer is a thick one called the derma or corium. This is made up of two main strata, the upper finer fibres and the lower coarser fibres. When the epidermis is removed, during the preparation for tanning, the corium shows a pattern of depressions and projections known as the grain of the leather. The corium during life absorbs natural moisture which is retained for some time after death occurs. The third layer is made up of adipose tissue which is known commercially as "flesh."

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[1] VanWagenen, Jared. *The Golden Age of Homespun.* Ithaca, 1954.

[2] Fletcher, Stevenson Whitcomb. *Pennsylvania Agriculture and Country Life.* Harrisbur 1950.

[3] Rawson, Marion Nicholl. *Handwrought Ancestors.* New York, 1936.

The derma or corium, which is the layer that is converted into leather, consists of interlaced bundles of connective tissues and fat cells in varied proportions in different skins. These determine the character and structure of the finished leather. Water, fatty matter, carbohydrates, proteins and mineral matter are found naturally in skin, their proportions varying with the type of animal, its age, sex, climatic conditions, etc. When the tanner receives the skin its composition has been changed or modified by bacterial action taking place between flaying and its receipt, by soluble matter being washed out during curing, etc. In calf, steer and cow hides, collagen forms about 95 per cent of the protein in the derma.[4]

Before about 1800 it was thought that the astringent principles of tanning materials consisted of a resinous substance that adhered to the skin fibres and made them firm and insoluble. The objective in all tanning methods is the curing of the skin so that its proteins, which are ordinarily decomposed by bacteria, are converted into a substance which does not decay under ordinary conditions of use and which can be moistened and dried without becoming hard.

According to Bishop, a tanyard or tannery previous to 1794 was made up of a number of hogsheads or oblong wooden boxes, 10 feet long, 6 feet deep and 6 feet wide, that were sunk into the earth near a stream with their tops a little above the surface. They were uncovered and had no bottom outlets. These served as vats and "leaches." A few similar structures above ground served as lime vats and pools. An open shed served as a beam house. The bark was crushed in a circular trough, about 15 feet in diameter, by alternate wooden and stone wheels turned by horses.[5] Hand pumps were used to fill and empty the vats. The primitive tan vat was sometimes a 6-foot rectangular pit in the ground, 4 or 5 feet deep, lined first with clay and then with hemlock or spruce planking. Pits varied in size from five or more feet for easy packing and turning of the hides.[3] Farmer tanners had only a few vats. Later, vat construction was improved. The used or spent tanning liquor was drained from the bottoms of vats by covered wooden troughs made of planks, and "leaches" were built in tiers, one above another, and hand-operated suction pumps raised the liquor.

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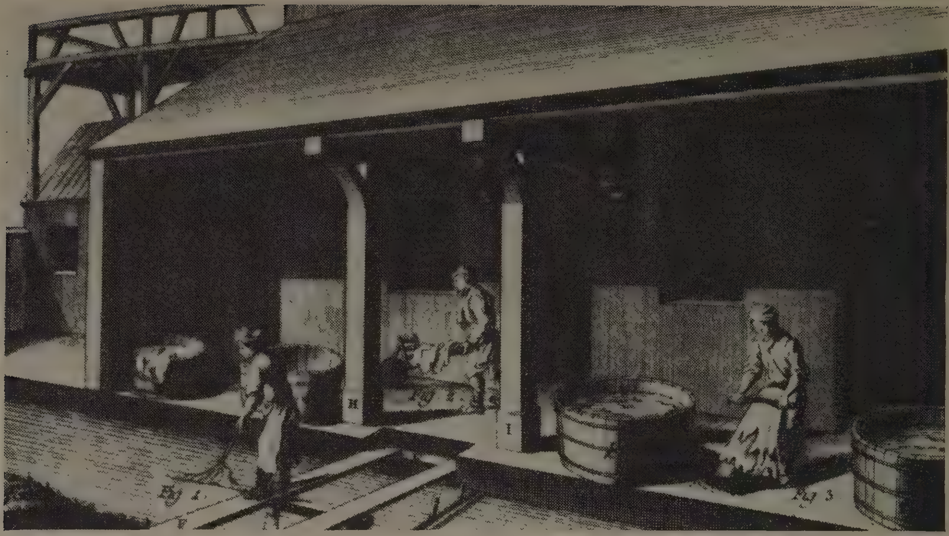
[4] *Encyclopaedia Britannica,* Vol. 13, 1952. Arnold, John R. *Hides and Skins.* New York, 1925.

[5] Bishop, J. Leander. *History of American Manufactures.* Phila., 1868.

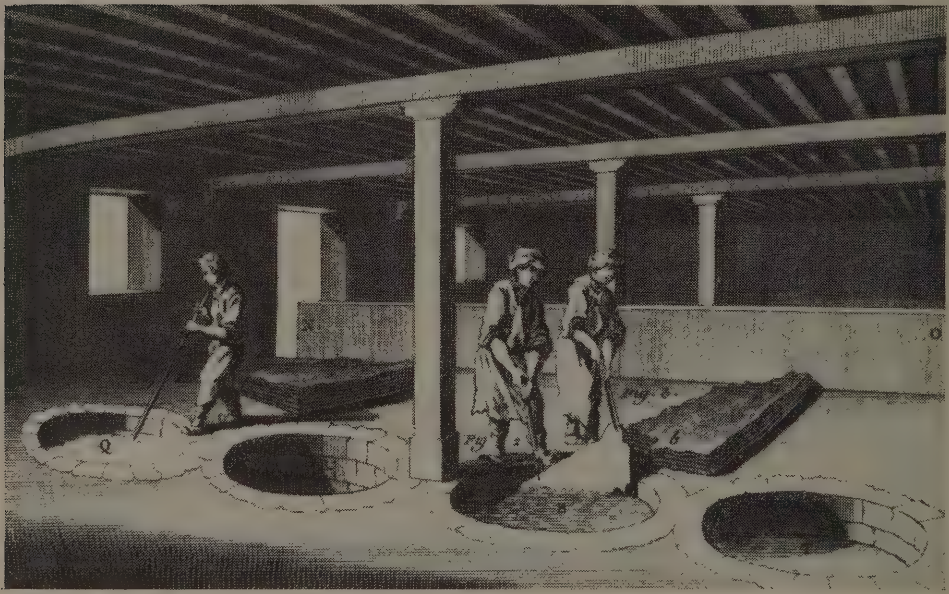
[3] *Loc. cit.*



Tanners at Work

Tanner's workshop along a river. Several workmen performing different operations. Fig. 1. Worker with long, iron tongs soaking and washing skins in river. Fig. 2. Worker, in center, with a wheelbarrow of skins which will be put to soak in one of the four vats. Fig. 3. Worker fleshing and dehairing skin on a tanner's horse or beam.

(From *Diderot's Encyclopaedia, 1751-1780*)



Tanners at Work

Worker at left stirring sediment in the lime vat. Two workers at right removing skins from lime vat and piling them on top of each other.

(From *Diderot's Encyclopaedia, 1751-1780*)

Some tanyards were in the open. Others had one building or shop where currying or drying took place. Some yards were enclosed by a board fence or a stone wall. Early detailed descriptive accounts are scarce. Benjamin Biles, of Trenton, in 1765 had 36 vats and "handlers," 2 large "leaches," 5 "limes" and 2 "bates," a good water pool and buildings for tanning and currying. In 1778 the same tanyard under a new owner, Stacy Potts, had 64 vats, 5 "limes," 2 water pools, a bark house and a currying shop. A tanyard at Tansboro, Camden County, in 1800 had only 6 vats, and at the same period Hardenberg and Dunham, of New Brunswick, had 61 vats and two buildings containing a beam room, bark mill, currying shop, and a storeroom holding 100 cords of tan bark. Around 1805, Thomas Elder, of Bloomsbury, filled his vats by spouts from the forebay of his mill. Joshua Barker's bark and millhouse in Upper Freehold Township in 1806 was 45 feet long by 20 feet wide. He had 12 vats, 4 "handlers" with "limes" and "bates" in proportion, and a stream of water ran through his lot. In 1821, James Robson, of Moorestown, on a two-acre lot had 50 vats, 2 "leaches," 43 "handlers," 4 "limes," 1 water pool, 10 "bates," a bark house, 2 mills, a currying shop and a beam house. Oliver Wade, of Springfield, had 100 vats, a bark mill, a bark house and a currying shop in 1823.

Before proceeding to describe the early processes, some of the terms should be defined. A "lime" was a pit or vat containing lime water which was used to remove hair from the hide. A "bate" was a bath or pit containing a fermented infusion of dog or chicken manure, which removed the lime and reduced and softened the fibers of the hide or skin which had swollen during the liming process. A "leach" was a pit in which ooze or tan liquor was made by steeping tanbark in water. A "handler" was a pit containing weak tanning liquor in which the hides were worked or handled.

When a hide came to the tanner he first marked with a knife, on the flesh side near where the tail had been, the initials of the owner. Then he cut off the tail, legs, and ragged head parts, because these did not warrant tanning. It was customary to split cowhides down the middle, making two "sides," and calfskins and sheep pelts were tanned entire. "Hides," the stoutest kinds being known as "butts" and "backs," came from mature cattle. The lightest hides were known as "kips." Calves, sheep, goats and small animals supplied "skins." A "green" hide was one fresh from slaughter. This was preferred for tanning over a salted or dried hide, as the latter sometimes cracked while being dried.

After being trimmed of its useless parts, the hide or skin was washed or soaked in water to get rid of blood and dirt. Sometimes a brook was used in which to wash the hide clean. Later, or if a stream was not handy, a large tub or cask, 5 feet across and 4 or 5 feet deep, full of water, was used. After washing, the hide was given a superficial scraping to free it from dirt and then it was ready for "liming."

The lime pit contained limewater and the hides remained in such a pit for two or three weeks. Every day they were drawn out, drained and then returned to the pit, this process being known as "handling." Liming loosened the hair and cuticle. Some tanners loosened the hair on heavy oxhides by laying the hides smooth in heaps for one or two days in warm weather and five or six days in the winter, and then sweating them by hanging them on poles in a smokehouse filled with the smoke from a smouldering fire of wet tanbark. This resulted in a small amount of putrefaction, and the hair was removed easily by spreading the hide on a wooden convex horse known as a beam and scraping it with a knife. Sheepskins treated this way permitted their wool to be salvaged. During early times the beam was a tree split longitudinally, at times 10 feet in length and raised at one end to a height of 3 or 4 feet.

After hides were beamed, and as it was necessary to remove all the lime, they were transferred to another vat known as a "bate." Here they were soaked in a mixture of hen or dog manure and water. Farmers used to sell their hen manure to the tanners for that purpose. After a period of time in the "bating" vat, the hides were scrubbed and rinsed in soft water in a pool or pit until they were ready for tanning. At this time they were soft and plump.

The tanning vats or pits were usually about 6 feet square, sometimes oblong, and 6 to 8 feet deep, arranged in rows with their top edges a little above ground level. The passageways between them were narrow. After being dug, the pits were lined first with clay and then with boards. Pipes for conveying the tan liquor were then arranged and the spaces between the wooden tanks were filled with clay. Various vegetable materials such as the bark of oak, hemlock, willow and other trees, gallnuts, tea teaves, etc., when macerated in water, yield an astringent substance of a grayish white color when pure. This is tannin or "tan," or tannic acid. When a skin is immersed in an infusion of tannin, it gradually absorbs it from the water and the skin becomes heavier, of a finer texture, and no longer liable to putrefaction. It is no longer soluble in water. Tanning therefore consists in soaking hides and skins in tannin until they are completely saturated. Oak bark, for example, ground into a coarse powder is put into the vats with water, the infusion being called "ooze." The hides, previously prepared, were put into small pits containing very weak ooze. Here they were allowed to remain, with frequent stirring called handling, for some weeks. The strength of the oozes was gradually increased. If thick hides (for sole leather) were being tanned, after the process was half completed, they were put into larger vats and covered with alternate layers of ground bark, about an inch thick, until the vat was filled. A top layer of bark was added and the pit was filled with weak ooze. Such tanning of heavy hides required 15 months. To be sure that the skin was fully tanned, a small piece of the edge was cut off. As far as the tan had penetrated the hide, the color was nutmeg-brown and the rest white. Before the process was complete, the upper and under sides were brown, and between them a white streak was observable in the middle. Each day the hides were moved up and down, or "handled." Some were taken out, drained, and put back in the pit. This was done with long-handled, blunt-pointed vat hooks.

From time to time the hides were examined and more bark added if necessary. Some hides required six months or more to tan. As a general rule, about a year was necessary from the time the skins or hides were turned over to the tanner until the finished leather was ready. After tanbark had been used for six months or more, it was called "spent tan." This was compressed into lumps and dried and sold for fuel.

When completely tanned, the hide was removed to gradually drain and to be stretched upon a convex piece of wood or "horse" on which it was smoothed and beaten with a heavy steel pin, or with a "wooden beetle" or a wooden hammer known as a "batt," or sometimes passed between iron cylinders. Such treatments made it solid and supple. Then it went to a drying house where it stayed until it was completely dry. Care was required during the drying of the hides and skins. The room in which they were dried had to be open in various places to admit free currents of air and at the same time the leather had to be protected from the sun's rays. The skins, when completely tanned, were taken from the pits without being beaten or shaken, and stretched on pegs or hung up by their heads from large nails. Each one was kept expanded by two or three sticks so that it was exposed to the air uniformly. Every day they were beaten twice on the flesh side with a wooden mallet. When the hides began to turn white and had started to stiffen, and before they were entirely dry, they were stretched out on a clean place and scoured with the spent tan which remained on them. After being cleaned in this manner, they were trod upon by the feet on both sides, in every direction, and completely flattened. They were then arranged in piles according to their sizes. After being in piles for a day they were exposed to the air as previously for four days. When nearly dry they were pressed under planks, weighted down by large stones, for a day. Then they were spread out upon an oak or marble table and beaten with an iron mallet, which compressed the tissues and smoothed them.[6]

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[6] Morfit, Campbell. *The Arts of Tanning, Currying and Leather Dressing*. Phila., 1852.

Calf skins needed for the entire tanning process from two to four months. Sole leather hides required from 15 to 20 months. The tanner's work was now finished. If the leather was to be used for soles of shoes, nothing additional had to be done. But if it was to be used for uppers, for harness, for binding books, it had to be curried to make it smooth and to give it color and lustre. Both tanning and currying were carried on by the same person, but before proceeding with currying practices something should be said of tanners' tools, tanbark, and tanbark mills.

CHAPTER IV

Tanners' Tools

For removing hair from the hide or skin a two-handled, curved scraper or unhairing knife was used. This was a little over two feet in length, and the blade was sharpened to an edge only on the lower concave side. The hide was spread on a convex, wooden horse called a beam, one end of which rested on the floor and the other on an adjustable two-legged trestle which could be fixed at the level of the operator's waist. The concave edge of the beamsman's knife being parallel to the convex surface of the beam, the operator by pushing the knife forward partially scraped and shaved off the epidermis and hair, and removed rough excrescences.[1]

After removing the hair and epidermis, the tanner then with a fleshing knife removed from the inner side of the hide all pieces of animal tissue. The fleshing knife, somewhat similar to the unhairing knife, had two edges. One, the concave edge, was used for scraping, and the other, the convex edge, was used for trimming off parts of the skin that could not readily be tanned. Sometimes the fleshing was done before the unhairing. Another tanner's tool was the vat hook for drawing the hides from the vats, or "handling" them.

A hide-splitting machine was perfected by Samuel Parker of Newburyport, Massachusetts, in 1809 which did away with the job of planing the leather to a desired thickness by hand. Skins could then be split into several thin layers with very little waste.

Various tanners had their own methods, learned from years of experience, and methods in general varied according to the kinds of hides and skins, such as those from lambs, sheep, goats, horses, cows, etc. The variations in the preparation of different kinds of leather were quite numerous even during the early 1800's. Liming came to be omitted for removing hair because it was difficult to wash out the lime, which hardened the hide and made it liable to crack. Instead the hide was immersed for several days in the sour liquor formed by strongly fermented rye or barley flour. The acid that was formed opened the skin texture. This method too was replaced by the use of very dilute sulphuric acid. About a pint of oil of vitriol was used to 50 gallons of water. The acid also checked fermentation.[2]

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[1] Rivington. *Book of English Trades.* Sprague, William B. Chron. Early Amer. Ind. Assoc., Vol. I, 1935.

[2] *On the Process of Tanning from Aikin's Dictionary of Chymistry.* "The Franklin Journal and American Mechanic's Magazine," Vol. I, 1826.

Around 1825 or 1826 John Burridge of London, England, wrote to the editor of the "London Journal of Arts" that he had been using a hydrometer to ascertain the relative degrees of strength in oak bark liquors. He named it a "barkometer." Another tanner, about this time, to every hundredweight of ground bark added eight pounds of red sumac berries. This he thought supplied the vegetable acid so necessary to tanning, and it also imparted a fine color to the leather.[2] In tanning, the pelt or skin is combined with tannin and other vegetable matter. In the process known as tawing, the skin is imbued with alum and salt. This is a rapid form of mineral tanning used for light leathers of delicate texture. Such skins are never put in the tan pits.

The early tanners who produced substantial leather impregnated their hides and skins slowly with weak ooze in their pits and stratified the skins with plenty of ground bark. Soft water was used to cover them. The tannin being gradually extracted penetrated the skin fibers uniformly instead of acting upon the surface of the leather as strong infusions did. One hundred pounds of hide tanned rapidly in a strong bark infusion produced 137 pounds of leather. One hundred pounds

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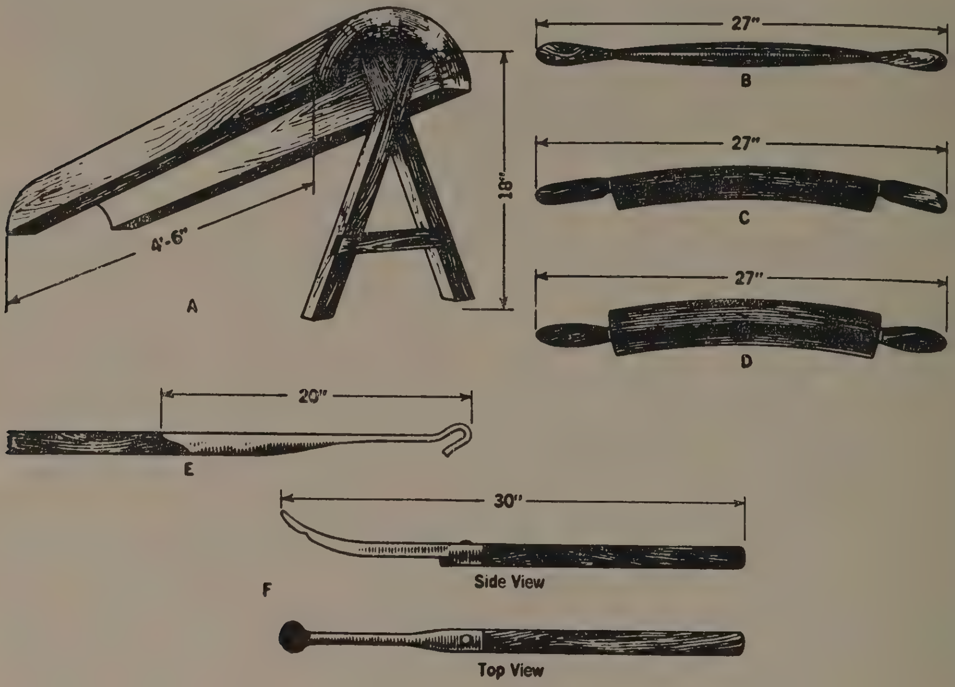
[2] *Loc. cit.*



TANNERS' TOOLS

A. Beam on which hide was spread to remove flesh and hair. B. Pin used for smoothing. C. Unhairing knife. D. Fleshing knife. E. Vat hook. F. Spud for stripping tanbark from trees.

(After William B. Sprague. Courtesy of Chronicle Early American Industries Association, 1935) tanned slowly in a weak infusion produced 117½ pounds. In the former case, leather highly charged with tannin was spongy and allowed moisture to pass easily through its pores, resulting in an inferior product.[3]

Hides came to the tannery in green, dry and salted states. The green hides came from an animal that had been slaughtered recently. They were left in water to soak for a half day or longer for the removal of dirt and blood. Dry hides required a longer soaking and they were frequently put in fulling stocks where they were washed and softened. Salted but not dried hides were cleaned by soaking in water and also by fulling them in order to remove salt and to make them soft. In salting, the hide was placed on the ground and the flesh side was sprinkled with salt, which was applied more liberally at the edges and spinal parts. It was then folded in a particular manner so as to form a square of one or two feet on a side. Several were piled together and left until the salt had dissolved and penetrated the tissue. This usually required two or three days. Then they were ready for market.[4]

According to Morfit, an average of 30 pounds of dry hide was necessary to produce 40 pounds of leather. Sixty pounds of salted hide produced 40 pounds of leather, and 74 pounds of green hide were needed for 40 pounds of leather. In liming, about a peck of lime was enough for a large hide. Milk of lime, being alkaline, was better than lime water. When a fresh vat was needed, quicklime was put in and covered with water and agitated until it became slaked and passed into "milk." The vat was then left for several days.

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[3] Ure, Andrew. *Dictionary of Arts, Manufactures and Mines.* New York, 1844.
[4] Kennedy, David H. *The Art of Tanning Leather.* New York, 1857.

CHAPTER V

Tanbark and Tanbark Mills

TANBARK

During very early times the bark used in tanning was probably pounded with heavy mallets in order to crush it. Later the bark mill operated by a horse sweep was utilized. Although the bark was supposed to be ground as fine as wheat kernels, the early bark mill could seldom grind so fine. Bark peeling from oak and hemlock trees was a farm-forest activity, or a by-product of lumbering or clearing the ground for farming. Tannin is yielded by the bark of many trees and by other plants and vegetables. This astringent substance is found in the bark of alder, beech, birch, oak, hemlock, larch, poplar and willow trees, as well as in various other trees found in different parts of the world. Oak galls were also used. Oak and hemlock bark supplied much tanning material, and in New Jersey oak was the principal source. In "The True American" (Trenton, N. J.) of May 24, 1819. a tannery at Bloomsbury (a suburb of Trenton) advertised for 500 cords of red oak bark. And on July 22, 1836 the following advertisement appeared in the "Princeton Whig": "Subscriber will sell, if applied for immediately from 20 to 30 cords of good red and Spanish oak bark of good quality for tanning. Cured and housed in the best order (without rain on it). Also about 8 or 10 cords of Black, and 6 or 8 of White oak in good order for tanning or capital for oven wood. Apply post paid to J. V. D. Bergen, Princeton. N. B. It will be measured to the purchaser on waggons by the sworn Measurer of the Borough."

As the bark was loosened more easily from the end of April to the end of June, peeling took place at such times. First a few small trees were cut down. Then on the large trees a cylinder of bark four feet long was removed where "the frontward notch of the axe and the cut of the saw from the rear were to be made." After the tree was felled it was laid on the small trees. Then the branches were cut off and the bark was ringed through to the wood in a four-foot cylinder and the cylinder was opened at the top. The cylinder was removed with a two-inch-wide, narrow spud, or peeling iron, with a thirty-inch-long wooden handle. The wedge, or "peen," at the end of the tool could also be used for ringing the tree in place of an axe. Free from the tree, the bark was leaned against the peeled trunks with the smooth side out so that the sun would dry the wet cambium. It was then corded and sold to the tannery. The peeling was hard work, performed in the dead, heated air of the forest, and in addition the peelers were exposed to the bites of mosquitoes and black flies. This description by Ulysses P. Hedrick[1] is for a much later period than the late 1700's or early 1800's in New Jersey. However, bark peeling, being a hand operation, was more or less the same whenever it was performed. An axe or hatchet was used for slitting bark longitudinally and for cutting incisions around the trunk. The peeling irons thrust beneath the bark to loosen it could not have been much different over the years.

After the bark was removed in a cylinder from the tree it was split into longitudinal pieces and dried slowly in sheds. If permitted to heat or ferment, it became moldy. At some places a loft was made by driving uprights of forked stakes in the ground, three feet high in the back row and two and a half feet high in the front. A sloping floor was laid upon these by putting lappings between the forks and the bearers. The bark was placed on such a floor with the thick ends toward the highest side. Smaller bark was put over this to a height of six or eight inches, and broad pieces were laid over the whole to protect it from rain or dew. To prevent molding, the pieces were turned in four or five days. In about ten days they were dry enough to be stacked by the tanner until he needed them. The stack was not supposed to be more than eight feet wide, so that fermentation would not take place, and it was supposed to be covered by a roof made and thatched like that of a hay or corn stack.[2]

In addition to oak bark, sumac was utilized by some New Jersey tanneries, the powdered leaves and young branches being used, not only in tanning but in dyeing orange, yellow and black. The "Palladium of Liberty" for August 23, 1821 carried the notice that John Thompson at his mill ("Late Doty's near Baskingridge") would pay on delivery six shillings in cash for "dry, bright Sumac." Previously in the same year, Solomon Doughty had advertised for 50 tons of sumac for his "Morocco Manufactory" in New York. Perhaps the mill for grinding sumac was at Basking Ridge. In the "New Jersey Mirror" for November 8, 1823 and succeeding issues, Anthony P. Morris, currier and morocco manufacturer of 68 South Third Street, Philadelphia, in a notice wanted sumac and was willing to pay for it in cash or in leather. As late as 1850 Kirkbride's Directory listed two sumac mills in Atlantic County, owned by Elisha E. Hudson and Abraham L. Iszard, both of Mays Landing. And Barber and Howe in their "Historical Collections of New Jersey" (New Haven, 1868) said that large quantities of sumac leaves were annually gathered in Pittsgrove Township, Salem County, and were dried, pulverized and sent to market.

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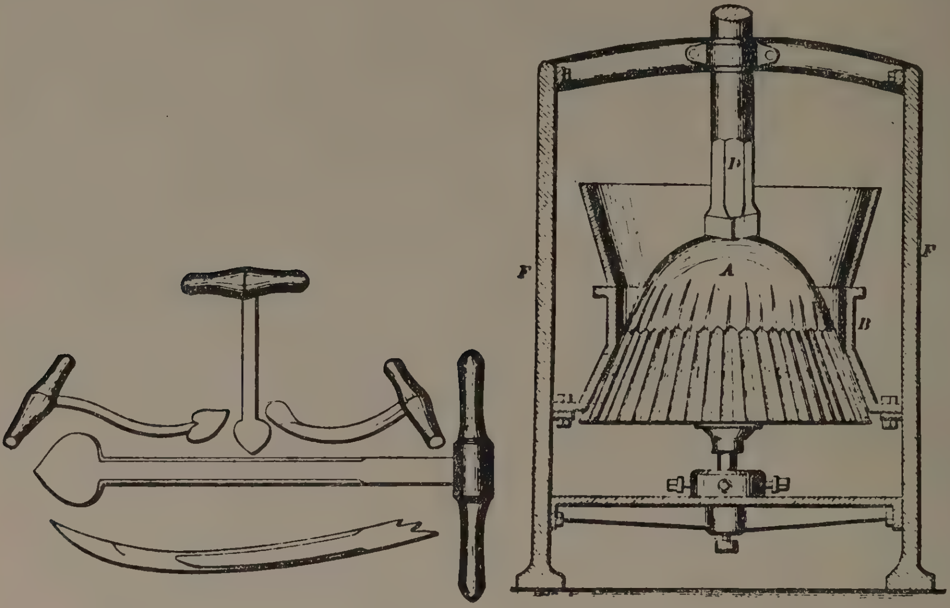
[1] Ulysses P. Hedrick. *History of Agriculture in the State of New York.* 1933.

[2] Morfit, Campbell. *The Arts of Tanning, Currying and Leather Dressing* (trans. from French). Phila., 1852.

Henry R. Procter describes a mill for grinding sumac leaves.[3] It consists of a solid, circular wooden bed, 15 feet in diameter, with a one-foot-wide depression, a few inches deep around the edge to receive the ground sumac from the bed. Two-edge rollers each five to six feet in diameter, each weighing about 2,500 pounds, and each thickly studded with numerous iron or wooden teeth, revolve around the circular bed and crush the leaves, which after screening are packed in bags, 15 to the ton, and sold by weight.

A patent was granted by George Washington, President of the United States, to John Biddis and Thomas Bedwell, of Pennsylvania, on August 10, 1791, giving them the exclusive right, for 14 years, to make and sell a discovery made by them for extracting the "essence" or "gum" from various kinds of bark for tanning purposes, or for dyeing. This "essence" or "gum" was extracted by heat in a brass or copper kettle and reduced to a solid substance of the consistency of tar. Biddis and Bedwell made over to Andrew Bartles and Nicholas Stilwell, of New Jersey, the right to erect works, manufacture and sell the material until the patent expired. Andrew Bartles lived at New Germantown, Hunterdon County. Bedwell's extract of bark could be kept any length of time, while ground tanbark did not retain its properties if kept for longer than one season. If the extract was to be



Left. Peeling Irons. Right. Weldon's Bark-grinding Mill. 1797. A. Conical, toothed drum rotating in casing. B. Upper part of B is a flaring hopper. F. Framing for supporting casing and grinder.

(Both illustrations from *Knight's American Mechanical Dictionary.* New York 1877) used in tanning leather, to every 100 pounds of it there had to be added 10 pounds of "Extract of Sumach." Three barrels of the extract were equal in effect to 2,000 pounds of crude bark. Orders were to be sent to Andrew Bartles, the manufacturer, and left at the New York post office.[4] Joseph Giles, of Vermont, in 1825 patented a liquid extract of oak and hemlock bark strong enough to tan calfskins in 48 hours. One hogshead contained the tannin of 40 cords of tanbark.

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[3] Henry R. Procter. *Text Book of Tanning.* London and New York, 1885.

In 1865 there was published in West Springfield, Massachusetts, a 16-page pamphlet entitled "Directions for using the Patent Excelsior Tanning Process, Patented March 18, 1862 by John Jay Johnson, Kalamazoo, Mich." By this process, the inventor claimed that a skin or hide could be tanned in from 15 minutes to 12 days as against months and years by the old method. Farmers, by using the process, could manufacture the leather and furs needed by his family at a saving of 50 per cent on the usual way of selling his hides and skins and buying his boots, shoes, harness and furs.

TANBARK MILLS

References to tanbark mills, according to Usher, occur in the years 1154, 1217, 1228, 1231, and 1279, but these, in the absence of descriptive details, may refer to the stamping or crushing kind of mills.[5] Some of the early mills appear to have been owned jointly by several tanners. The object in grinding the bark for tanning purposes was to make its constituents more readily and more quickly soluble in water. It was not ground to a fine powder because the water would then act upon it too rapidly, and fine powder had a tendency to form a compact mass, when wet, which would retard the infiltration of the water. In the different countries the mills were driven by horse, water, or steam power. The tanners for the most part ground their own bark. A tannery in Newark, New Jersey, in 1676, located above a meadow with the vats on a hillside close to a waterfall, had on its oak floor a large wheel with wooden cogs. This revolved slowly and crushed the bark. Some bark mills consisted of two wheels, one of wood and one of stone, which alternated in crushing the bark by their travels in a fifteen-foot circular trough. And there were also crushing stones that operated horizontally, one above the other, like the stones in a gristmill, the bark being crushed or shredded between them.[6]

An old tanbark mill of the middle eighteenth century, found originally at East Guilford, Connecticut, consists of a runner stone about 5 feet in diameter and 7 inches thick. It ran on its edge in a circular trough, cut from rock, that was about 14 inches wide and 5 inches deep. The outer rim of the trough was about 9 inches wide and the inner rim about a foot in width. The outside diameter of the trough was about 16 feet. The face, or cutting edge, of the coarse red sandstone runner was corrugated. This type of mill, known centuries ago, is called an edge-runner. In the center of the mill was a large center stone with a square hole in which a post was placed, this post being attached to the shaft on which the stone runner operated. These mills were operated by ox or horse power. Smaller ones on the same principle were operated by man power. Bishop, describing tanneries before 1800, mentions a circular trough 15 feet in diameter in which bark was crushed by alternate stone and wooden wheels turned by horse power. Sometimes bark was ground by water power near the source of supply. At first millstones were used and later iron mills. The coffee-mill type of grinder replaced the edge runners toward the close of the eighteenth century.[7]

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[4] Charles Bartles Papers, 1795-1833. Rutgers University Library.
[5] Usher, Abbott Payson. *A History of Mechanical Inventions.* Cambridge, Mass., 1954.
[6] Rawson, Marion Nicholl. *Handwrought Ancestors.* New York, 1936.

Morfit describes in detail some of the bark-grinding mills in use in various countries up to about 1852. He states that in England the bark is crushed between two stones. In southern France at the time of his writing, a mill in use consisted of two vertical stones about 7 feet in diameter and 18 inches thick. The axle of the stones was fixed "in a frame enclosing an upright shaft turning upon a pivot, and fixed in the center of a strong stone bed." Rotary motion imparted a double movement to each stone, "that upon the other, and that which it underwent in describing a circle upon the stone bed upon which it rolled." [8]

A bark-grinding mill known as Weldon's was in use around 1800. This had a conical iron drum with teeth that rotated in a toothed, iron casing, both being supported by an iron frame. The bark was rasped as it passed between the toothed drum and the toothed casing.[9]

In the "True American" (Trenton) of November 11, 1811, a notice by W. & J. Old refers to a patent that had been granted to Cornelius Tobey for a new and improved bark mill, and the fact that they had purchased the patent right for Pennsylvania, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Kentucky, Tennessee and Ohio. The grinding part of the mill was of cast iron, and a small boy with a horse could grind three times the quantity that could be ground with a stone. Robert Goodwin, of Trenton, had the right to erect and sell the machine in New Jersey. Three were in operation in Trenton, and one belonging to Thomas Hill in New Brunswick. It would be interesting to trace the development of bark mills through their successive improvements, but in this account we are interested primarily only in the very early ones.

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[7] Warner, Martha E. The Old Tanbark Mill. Chron. Early Amer. Ind. Assoc., Vol. I, 1936. Landis, H. K. Tan-Bark Mills. Chron. Early Amer. Ind. Assoc., Vol. I, p. 24-7. 1937. Bishop, Leander. *American Manufactures,* Vol. I, p. 53, 454.

[8] Morfit, Campbell. *The Arts of Tanning, Currying and Leather Dressing.* Phila., 1852.

[9] *Knight's American Mechanical Dictionary,* Vol. I, New York, 1877.

TANBARK PRODUCTION IN NEW JERSEY, 1860

(U. S. CENSUS)

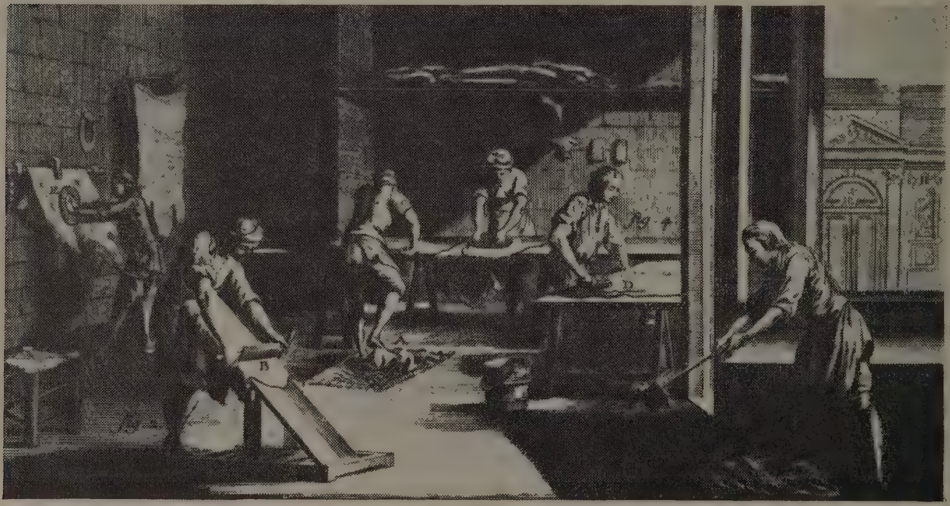
County	No. Establishments	Capital Invested Dollars	Cost of Raw Materials Dollars	No. Hands Employed	Annual Cost of Labor Dollars	Annual Value of Products Dollars
Essex	2	7,500	3,500	3	720	8,500
Morris	1	500	1,050	1	360	2,500
Passaic	1	1,000	700	1	312	1,800
Somerset	1	500	720	1	168	1,088
Totals	5	9,500	5,970	6	1,560	13,888

There were two establishments in Cumberland County that prepared sumac. For these, the capital invested amounted to $2,500; cost of raw materials, $1,700; number of hands employed, 4; annual cost of labor, $600; annual value of products, $2,850.

CHAPTER VI

Early Currying Practices

As a rule tanning and currying in early New Jersey were carried on as a single business, and in the early advertising currying as such was seldom stressed. It was taken for granted that the tanner would curry such skins as needed it. Hides intended for sole leather were ready for the shoemaker as soon as the tanner had finished with them, but thinner skins to be used for uppers, harness, book bindings, etc., had to be dressed by the currier and given smoothness, pliability, color and lustre. As the leather supplied by the tanner was stiff and unyielding, using calfskin as an example, the currier first soaked it in water until it was soft. It was then shaved on the inner side with a currier's knife over a currier's beam in order to provide uniform thickness and regularity of surface. Next it was placed on an inclined table, sometimes marble, and "scoured with a brush and water on both sides and then with the edge of a narrow smooth stone set in a handle," and again with an iron "sleeker" similar in shape to the stone. A stretching iron was then used to press out all the water.



CURRIERS AT WORK

In rear center at left, worker treading the hurdle. In foreground at left, worker removing surplus flesh from skin on currier's beam. In extreme rear, center, worker stretching skin with stretching iron or slicker. Worker at table at right using a pummel. At extreme left, close to wall, worker is paring the skin with a "lunette." At extreme right in foreground, worker is beating the skin with the "bigorne" or mace.

(From *Diderot's Encyclopaedia, 1751-1780*)

Next the skin was "stuffed" with a mixture of tallow and tanner's oil. This was applied to the flesh side. The skin was then hung up to dry. Afterward it was rubbed on the hair side with a board and the flesh side was again scraped with a knife. The flesh side was then blacked with lampblack and tanner's oil. Following this, paste was applied with a brush. After drying, both sides were rubbed with a glass "sleeker." The process was then at an end. Horse hides were blacked on the hair or grain side, and harness leather was similarly treated. Some curriers specialized in dressing only calfskins and leather to be used for shoe uppers, harness and carriages. Curriers who dressed thin leather, as a rule, tanned the skins themselves, using sumac.[1]

According to Ure (1844) the currier, after the skin was delivered to him, in order to make it workable, after it was dipped in water used a "hurdle" about a yard square, made of "basket twigs or of wooden spars, fixed rectangularly like trellis work," upon which "he trod the leather or beat it with a mace or mallet." This treatment made it soft and flexible. He next used the knife to remove inequalities. Then the leather was thrown again into water and scoured with pumice stone on the grain side. The above treatment was one of the four chief operations by the currier. The second was the application of the pommel, which gave the leather a granular appearance and made it flexible. The leather "was folded with its grain side in contact and rubbed with the pommel of hard wood or cork (with a smooth surface) then rubbed only on the grain side." The third operation was scraping to make the leather uniform in thickness. The fourth was dressing it with the round knife. The leather was stretched upon the wooden cylinder and the edge of the knife was "applied to the surface of the leather, slantingly from above downwards." This pared off fleshy parts and required experience and dexterity. Then the leather was sent to the drying shed where it was "stuffed" or "dubbed" (daubed) with oil (made by boiling sheepskins in cod oil). This was often done before the pommel was used. Then a brush dipped into a mixture of oil and lampblack was applied to the flesh side, and after drying the leather was tallowed and slicked with a broad, smooth lump of glass. The hair or grain side was accorded somewhat similar treatment.[2] The size was prepared of equal parts of glue and tallow.

Various methods of currying leather were in use and the leather received designations according to the methods of dressing, such as tallowed, waxed, oiled, grained, etc. Harness leather and calfskins were finished more or less the same way. A blacking composition was made of copperas, iron rust and bark liquor. Grained leather which was used by shoemakers for uppers of boots or large shoes was finished the same as harness leather. After being shaved to the required thickness it was pommeled or grained to make it flexible and to give it the granular appearance.[3] It should be understood that the methods of currying and tanning as herein described are simply bare outlines and do not convey any idea of the work and skill necessary to produce the finished product. Nor do they attempt to outline the variations in use depending upon the types of hides and skins.

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[1] Hazen, Edward. *Panorama of Professions and Trades.* Phila., 1837.

[2] Ure, Andrew. *Dictionary of Arts, Manufactures and Mines.* New York, 1844.

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[3] Kennedy, David H. *The Art of Tanning Leather.* New York, 1857.

CHAPTER VII

Currying Tools

The hurdle, or screen made of basket twigs or narrow wooden strips placed so that the openings were about three inches square, was about one yard square. The currier treaded the leather upon the hurdle. The beam used in currying was a plank, adjustable to an angle and faced with a piece of lignum vitae about two feet in length, six inches wide and two inches thick. This was known as the beam board. The mace was a cubical block of wood having on each of two parallel sides, four egg-shaped pegs of hard, polished wood. A thirty-inch handle was inserted between the two pegged surfaces. The shaving or head knife was "a flat metal blade about a foot long and a third as broad, the round handle at one end being an extension of the blade's long dimension and the other handle being at right angles but in the same plane." Each side of the blade was rubbed to a wire edge on a coarse grit stone and the wire edge afterward removed and a finer edge made with a finer stone. The cross handle of the knife was fixed firmly between the knees of the workman, and while in a kneeling position "he turned the edges to an angle with their former position by means of a polished steel similar in shape to a butcher's steel." The wet skin having "been thrown flesh uppermost over the vertical beam," the workman "pressed his body against it and leaning over the top held the knife by its two handles, almost at right angles to the leather, and proceeded to shave it by a scraping, downward stroke which the wire edge, being set at right angles to the knife and almost parallel with the skin, turned into a cut." The skin was shifted in position so that all parts of it were brought under the action of the knife. In such a manner the thickness of the leather was reduced and equalized.[1]

The leather was then soaked in a weak solution of borax and soft soap and placed, flesh side down, on a stone or mahogany table where it was worked with a steel stretching iron or "slicker" to take out lumps and inequalities and also to extend the skin. "The wooden part of the slicker was grasped in both hands and the blade was half rubbed and half scraped over the surface of the leather in successive strokes, the angle of the slicker being a continuation of the angle which the thrust out arms of the worker formed with the body, perhaps 30 or 45 degrees with the leather, depending on the pressure to be applied." [2]

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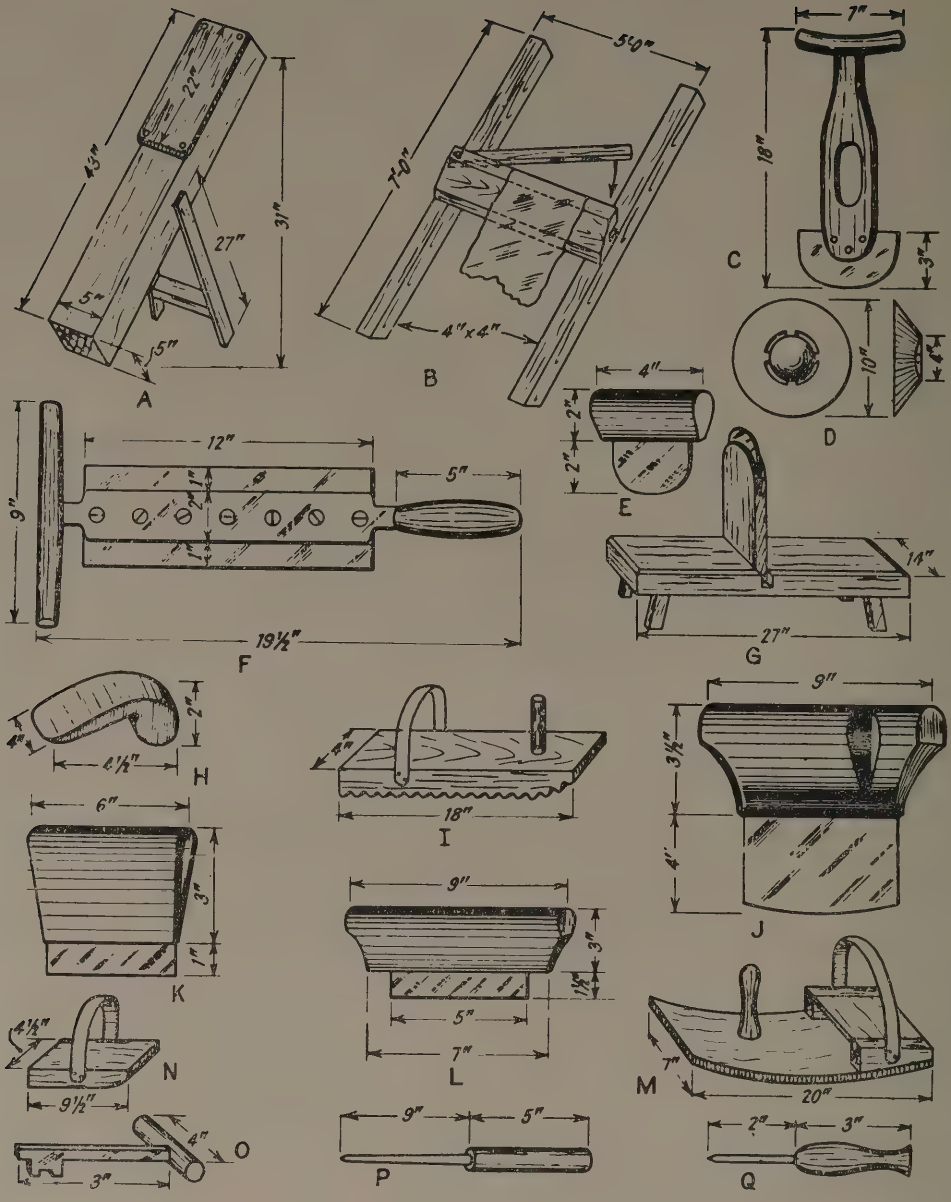
[1] *Encyclopaedia Britannica,* 11th ed. Sprague, William B. The Tanner and Currier. Chron. Early Amer. Ind. Assoc., Vol. I, Nos. 3-4, 1936.

[2] *Encyclopaedia Britannica,* 11th ed.



Currier's Tools

A. Beam on which skin was shaved with knife F. B. Perch in which skin was clamped for "staking." C. Arm stake for smoothing and stretching. D. Round knife. E. Glass slicker. F. Shaving or head knife. G. Staking stand. H. Brass slicker. I. Raising board for graining. J. Steel slicker. K. Iron slicker. L. Stone slicker. M. Cork paumelle. N. Raising board. O. Key for shaving knife. P. Turning steel. Q. Finger steel.

(After William B. Sprague. Courtesy of Chronicle Early American Industries Association, 1936)

The grain or hair side was then scoured with pumice stone and then "sleeked" with a steel or brass slicker. It was then dried and stuffed or dubbed (daubed). The oiled or greased skins were dressed with the

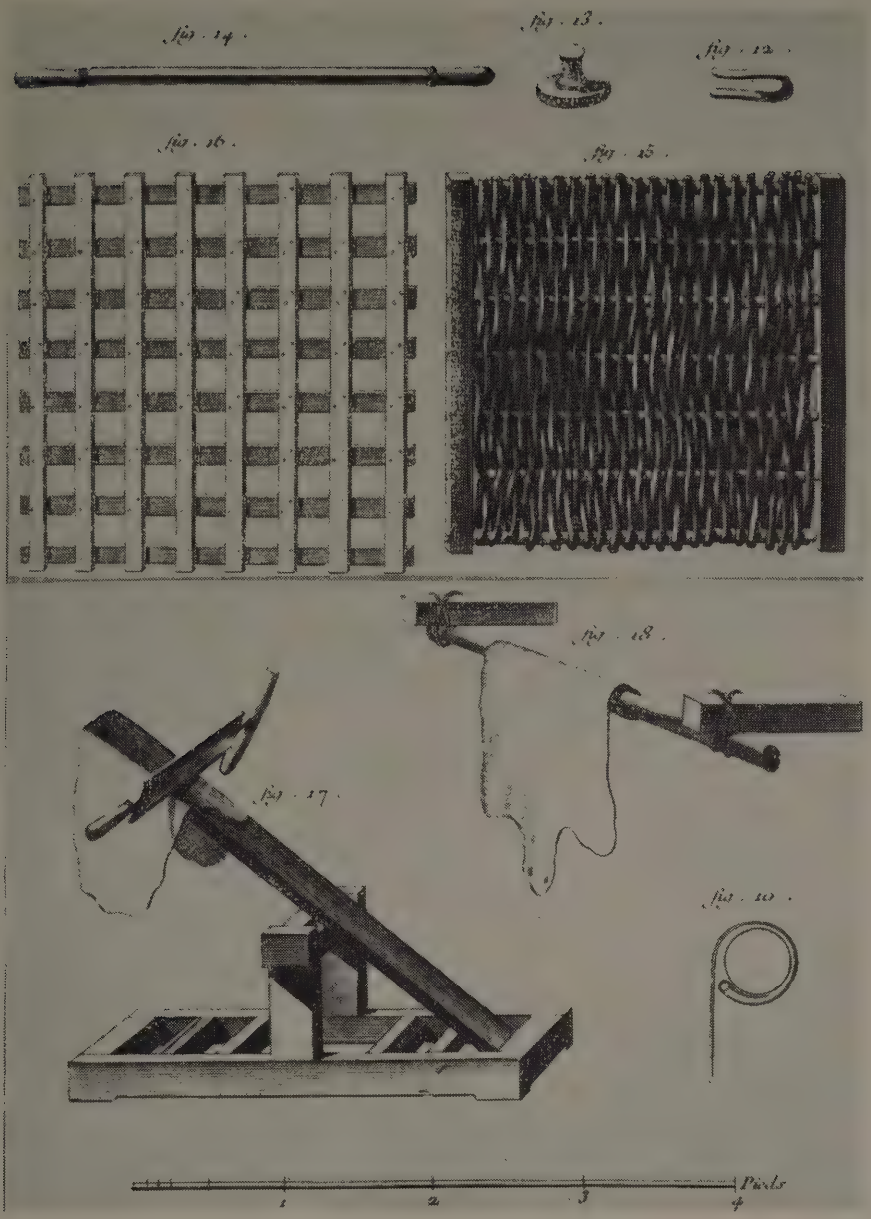


fig. 14.
fig. 13.
fig. 12.
fig. 16.
fig. 15.
fig. 18.
fig. 17.
fig. 10.
1
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CURRIER'S TOOLS

Fig. 14. Straight, two-handled, broad-bladed knife, coutreau tranchant. Fig. 13. Smoother. Fig. 12. Valet or hold fast. Fig. 16. Hurdle. Fig. 15. Another type of hurdle. Fig. 17. Currier's beam, horse or trestle. Fig. 18. Dresser.

(After *Diderot's Encyclopaedia, 1751-1780*)

round knife (lunette) which was circular, 10 to 12 inches in diameter with a round center hole 4 or 5 inches in diameter, in which the hands were placed to operate it. The concave part of the knife was applied to the skin. The "cleaner" was a straight knife 2 inches wide with a handle at each end. There were sharp-edged and blunt "cleaners." [3]

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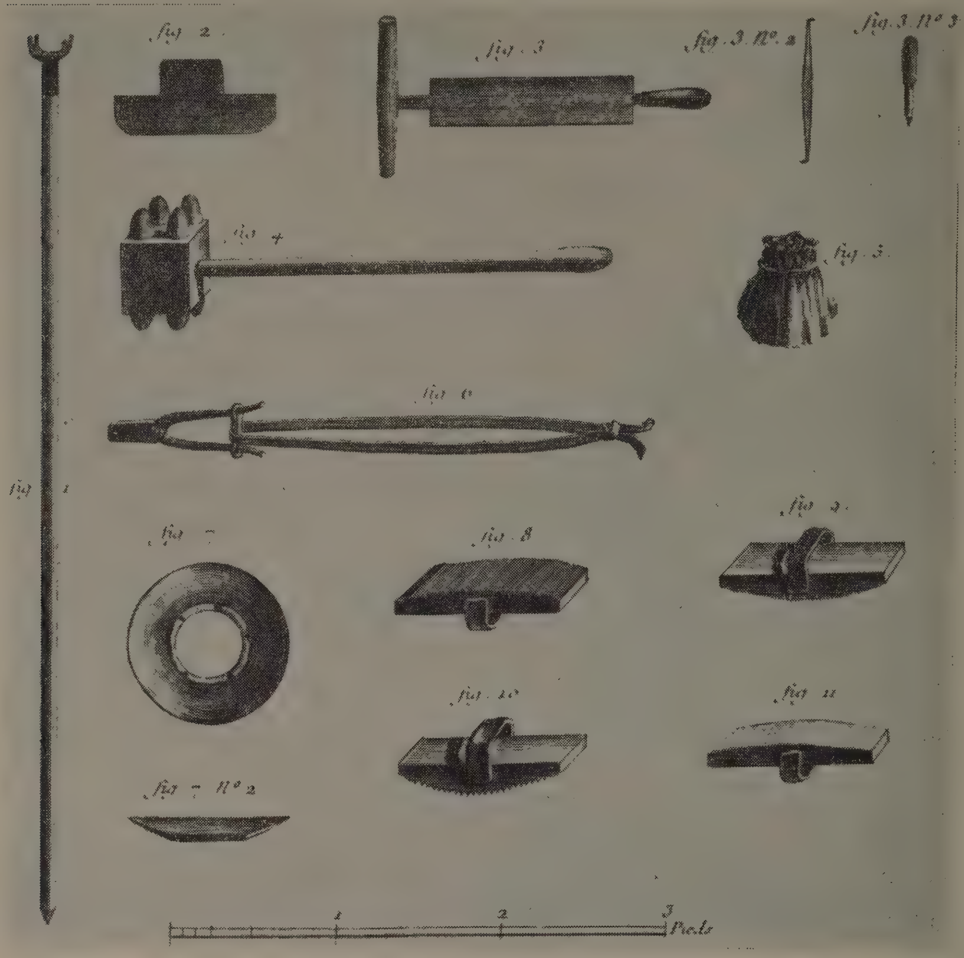
[3] Ure, Andrew. *Dictionary of Arts, Manufactures and Mines.* New York, 1844.

A "dresser" was a cylindrical bar with its ends fixed horizontally. It served by means of a parallel stretched cord to fix a skin in order to dress it. There were strong-toothed pincers, with hook-end handles which could be drawn together by a strap or cord, and these were used to stretch the leather in any direction while it was being dressed.[3] When the skin was folded with its grain side in contact it was rubbed with a corrugated or smooth board called variously a raising, graining or arm board, pommel or crippler. This produced a granular effect and softened the leather. For sizing, soap, glue, pitch, linseed oil, beeswax, tallow, and extract of logwood were used in a mixture of two or more ingredients which was applied with a sponge or brush



Currier's Tools

Fig. 1. Crochet or hook. Fig. 2. Slicker of iron or copper. Fig. 3. Currier's knife. Fig. 3, No. 2. Section of currier's knife. Fig. 3, No. 3. Sharpening steel for currier's knife. Fig. 4. "Bigorne" or mace. Fig. 5. Mop for applying tallow. Fig. 6. Parer's pincers and strap. Fig. 7. "Lunette." Fig. 7, No. 2. Sharpener for "lunette." Figs. 8, 9. Fine-toothed pummel. Fig. 10. Coarse-toothed pummel. Fig. 11. Cork pummel.

(After *Diderot's Encyclopaedia, 1751-1780*) and rubbed in with a glass slicker. Later the skin was waxed with a brush dipped in oil and lampblack. This was applied to the flesh side until it became black. Wrinkles were eliminated and the leather was smoothed with a "grit stone" or a stone "slicker." The last graining was done by rubbing with a "ball of boxwood" with ridges around its center or with a pommel of cork. A polish was obtained by applying oil and rubbing with a glass ball or a glass slicker. When a smoothness necessary for glove-making was needed, a "staking stand" was used. This was "an iron blade mounted in a heavy stand of an upright plank, or bolted to the floor." The skin was wet and thrown over the blade in the stake. It was then pulled in all directions, over the smoothing stake. This was forcibly and skillfully done. Another tool for the same purpose was the "arm stake." This tool was carried on the workman's left shoulder when not being used.[4]

Another device was the "perch," an H-shaped, heavy wooden frame that was inclined and fastened against a wall. A movable wooden bar, pivoted at one end and capable of being locked or unlocked, rested on the crosspiece. "With the bar raised at one end, perhaps half a dozen skins were thrown over the crosspiece, so that about two-thirds of their length hung down in front, and the bar was then let down and locked, holding the skins as in a vise. The workman then grasped the topmost skin at its lower edge with his left hand, and holding it taut, but constantly shifting his grip, forced the blade of the arm stake against the skin from its upper part to its edge, until all parts which he could reach were thoroughly smoothed and stretched." As each skin was finished it was flipped over the crosspiece of the perch.[4]

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[4] Sprague, William B. *The Tanner and Currier.* Chron. Early Amer. Ind. Assoc., Vol. I, 1936.

CHAPTER VIII

Taxes on Tanneries

During 1675, for taxing purposes green hides in East Jersey were valued at 3d. per pound and dry hides at 6d. per pound, and were made receivable in payment of taxes. According to an act to raise 100,000 pounds by taxation for discharging debts and defraying the necessary expenses of the State of New Jersey, that was adopted December 5, 1778, tanneries were rated at the discretion of the assessors, not under 15 shillings nor above 20 pounds. A farmer whose tanning was not done for sale or hire paid no tax on his modest tannery. In 1782 a tannery was valued and rated at not over seven pounds; in 1784, 1785, and 1786, at not over 35 shillings; in 1790, at not over five pounds. An estimate of the ratables in the State of New Jersey taken by the Legislature on January 25, 1794 placed a value of 40 pounds on each tannery. The number of tanneries in each county with their total valuations follows:

TANYARDS, NUMBER AND VALUE BY COUNTIES IN NEW JERSEY FOR 1794

County	Number of Tanyards	Valuation Pounds
Bergen	16	640
Essex	14	560
Middlesex	14	560
Monmouth	40	1,600
Somerset	23	920
Burlington	28	1,120
Gloucester	10	400
Salem	11	440
Cape May	1	40
Hunterdon	30	1,200
Morris	22	880
Cumberland	5	200
Sussex	18	720
Total	232	9,280

In 1803 the township assessors were directed to assess and rate each vat at not over 10 cents. The "vat" also included each lime-pit and pool. All were rated as "vats." In 1820 the vat rate went up to 20 cents, and in 1821 it stood for that year only at $1.50 per vat. From the Votes and Proceedings of the Forty-fifth General Assembly of the State of New Jersey, Trenton, 1821, we have the following schedule showing the number of vats per county and their taxes:

TANNERY VATS, NUMBER AND VALUE BY COUNTIES IN NEW JERSEY FOR 1821

County	Number of vats	Tax at $1.50 per Vat
Bergen	142	$213
Essex	376	564
Middlesex	352	528
Monmouth	341	511½
Somerset	254	381
Burlington	397	595½
Gloucester	146	219
Cumberland	90	135
Salem	117	175½
Hunterdon	472	708
Morris	212	318
Sussex	299	448½
Total	3,198	$4,797

From 1830 to 1838, inclusive, the tax per vat was 30 cents. In 1840 it declined to 15 cents. In 1841 it was 25 cents, and from 1844 to 1848, inclusive, it remained at 30 cents per vat.

CHAPTER IX

Tanners' Daybooks

Timothy Ayre, a tanner of Norwich, Connecticut, started a daybook which now rests in the library of Rutgers University. This contains entries, but not consecutive ones, from 1743 to 1783. Timothy Ayre was the youngest of the five children[1] of Joseph Ayre (born 1658) and Sarah Corlis (born 1663) who were married November 24, 1686. Some of the early entries in his book for 1749 and 1750 are: October 16, "I laid down my leather"; November 22, "I drue my leather"; May 12, "I drue my limes"; May 16, "I made my handlers"; May 31, "I laid my skins a soak"; September 10, "Drau my skins." He sold sole leather, made shoes, bought hides and calfskins. On November 12, 1743 he bought from Nathaniel Wood a cowhide for £2.16s.7d. About the same time he charged £2.16s.0d. for a side of sole leather. For making shoes and pumps his charges ranged from 14 to 19 shillings and also ran to one and two pounds. He bought calfskins for around one pound each, and in 1750 for a side of leather his charge was £4.10s.0d. Timothy Ayre apparently died in 1771 or the first part of 1772, as charges due him in 1764, 1765 and 1766 were decided on March 20, 1772 by two arbitrators not to be due to the estate of Timothy Ayre, late of Norwich.

Another Timothy Ayre, who made entries in the same daybook, sold cider, carted timber, hired out his horse, sold apples, wheat, flax, dyed yarn, made and mended shoes, sold leather, corn, oats, rye, tobacco, worked for others at 10 shillings per day, boarded horses, and tanned hides and sheepskins. For tanning one side of a horse hide he charged 2 shillings and 6 pence. For pasturing a cow for 30 weeks, he charged £1.10s.0d. On April 8, 1783 he took Mr. William Ellis' cow to keep.

Another tanner's account book in the Rutgers University Library is that of Daniel Freeman, Essex County, New Jersey. This contains entries from 1801 to 1806. In 1801 he paid £1.1s.11d. for one hide and £10.1s. for nine hides. These are just a few of many entries showing prices. For example, he bought sheepskins and many hides in 1802, paying the following prices for 187 hides, which made up only one entry.

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[1] Joseph, b. May 8, 1688; Sarah, b. Oct. 15, 1690; Abigail, b. Sept. 8, 1693; Joseph, b. Dec. 23, 1695; Timothy, b. Mar. 25, 1698.

	£	s.	d.
9 hides	9	18	0
12 "	15	8	0
8 "	8	16	0
11 "	12	2	0
12 "	13	4	0
25 "	27	10	0
18 "	19	11	0
44 "	48	4	0
20 "	22	0	0
11 "	12	2	0
17 "	18	14	0

David Freeman, like other tanners of his time, also made and mended shoes and boots, charging 4 shillings for mending a pair of shoes, 4 shillings and 6 pence for "soaling" a pair of shoes, 12 shillings for making a pair of shoes, and 14 shillings for making a pair of boots.

Another tanner's book, that of Andrew Bray Van Deren, of Basking Ridge,[2] has entries from 1824 to 1838. Van Deren had many customers and apparently did an extensive business. In June 1824 he paid $3.00 for four horse hides, $25.89 for 35 calfskins, $0.30 for two sheepskins, $25.51 for two barrels of oil, and $4.03 for 43 pounds of tallow. He also had accepted 6 beef hides, 14 calfskins, 18 sheepskins, and 1 horse hide to tan on shares. During the end of 1824 he was paying 5 cents per pound for hides. In 1825 he paid $1.50 for having one cord of bark carted and in 1826 he paid William Sanders $2.00 for a white oak tree and the remainder of the bark on Sanders' lot. During 1826 he bought veal skins for 10 cents per pound. Apparently such skins weighed from six to 10 pounds each. In 1827 he sold eight calfskins for $12.00, 15 sheepskins for $4.68, and 50 pounds of "soal" leather at 27 cents per pound, or $13.50. In 1831 he paid a man 50 cents per day to peel bark. He made frequent sales of sole leather.

From information supplied by Miss Helen M. Wright, of Jersey City, New Jersey, one may obtain glimpses of the tanning activities of Charles Thompson, of Mendham, New Jersey. On December 24, 1819, he purchased a hide for $2.55 from J. L. Thompson, and on January 26, 1821, he paid in full the amount he owed Ebenezer Condict for hides. In June 1834 Walter Dacle (Daele) sent Thompson a bill for £19.14s.9d. for broadcloth, woolen goods, weaving cotton yarn, etc. From May 23, 1840 to November 12, 1840, Charles Thompson bought seven items from J. T. Garthwaite. These included a barrel of oil (30½ gal.) for $15.50 and 34 sides of sole leather. The total bill was $160.61. On August 6, 1840, Thompson was credited with $80.74 for 34 sides of sole leather which left a balance due of $79.87. On January 23, 1841, Thompson gave Garthwaite $41.00 in cash and a note for

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[2] In library of Rutgers University.

$29.60, or a total of $70.60, thereby reducing the balance to $9.27. From this amount, $0.52 (1½ months interest paid) was deducted, bringing the balance to $8.75. It is not known if this was paid, as there are no records, but it is assumed that it was.

The following receipt is self-explanatory. "Received Newark April 4th 1845 of Charles Thompson fifty dollars in part payment for a Bark Mill which was left with him on tryal at Sixty five dollars the said mill is to remain on further tryal if it works to his Satisfaction he is to pay me the balance of the Sixty five dollars, if not, the mill is to be Subject to impouden by my paying him fifty dollars.

"Daniel Bosworth."

Stephen Guerin on February 25, 1857 sent Thompson a bill for $14.35 for three beef hides, and wrote at the bottom, "Mr. Thompson Sir I am in want of money at present and you will oblige your friend by sending the above Bill by my Boy Amos Hind

"Stephen Guerin."

Among the notes supplied by Miss Wright there was a "Recp^{t} for tanning from T. B. Clagstan." This is quoted in full, "Sir after your Skins or hides are soft Enough for the Lime then make use of all Lime necessary to lime the pack then put in your Skins or hides and haul [handle] them three times a day Eight day are sufficient to lime Calf Skins allowing time for hides or hair work two Days in water then put in dressit and handle 3 and handle 3 time first Day, 2 Day work on grain Side, 3 day handle 3 times, 4 day ? to work both sides in B. . . . ? then thru Clear water thus
"S. B. for 100 Calf or 200 Sheep Skins or 50 Sides of Leather one Bushel Ry meal one Bushel Wheate Brand 12 quarts put in Salt 6" alum powd alum put the salt with it add Six quarts Ry Whisky so the alum dissolves have a tub prepared in which water—sufficient to cover skins or hides Let them remain ?? 10 hours if—16 hours stir them up."

CHAPTER X

Early Tanneries in New Jersey

The earliest record of a tannery in New Jersey appears to be that of John Ogden, one of the proprietors who introduced tanning into Elizabeth around 1664. Another early tanner was Hugh Roberts, whose place was located on Hugh Roberts Brook, Newark, around 1670. In Salem, West Jersey, there was John Eldredge in 1675. And of course there were early settlers who did their own tanning and whose names never got into the records. Satisfactory figures on the number of tanneries in New Jersey before 1794 are difficult to obtain. After that date they are fairly consistent, especially if used to indicate trends. Thomas F. Gordon in his 1834 "Gazetteer of the State of New Jersey," said: "The manufacture of leather from the hide into various articles of its use is very extensively conducted. There are 2,876 tan vats and the fabric of shoes, boots, and harness, gives employment and wealth to many individuals in Newark, Bloomfield, Rahway, Burlington, &c. &c. and its item forms a large item in the exports of the commonwealth." The following tables supply figures on the distribution of tanneries and tan vats in New Jersey by counties from 1794 to 1850. For some years the number of tanneries was reported and for other years, the number of vats, which makes comparisons difficult.

Tanneries in New Jersey

(By Counties as Constituted During Years Mentioned)

County	No. Tanneries 1794[1]	No. Tanneries 1810[2]	No. Tanneries 1840[3]	No. Tanneries 1850[4]	No. Tanneries 1850[5]
Bergen	16	20	9	..	1
Burlington	28	26	7	..	7
Camden	..	..	..	..	3
Cape May	1	..	..	..	..
Cumberland	5	6	4	..	2
Essex	14	..	10	..	35
Gloucester	10	13	4	..	2
Hudson	..	..	..	..	..
Hunterdon	30	45	23	..	2
Mercer	..	..	13	..	3
Middlesex	14	17	6	..	..
Monmouth	40	18	15	..	5
Morris	22	38	19	..	...
Ocean	..	..	..	..	..
Passaic	..	..	7	..	3
Salem	11	9	4	..	3
Somerset	23	30	14	..	3
Sussex	18	26	15	..	14
Union	..	..	..	..	..
Warren	..	..	9	..	12
Totals	232	248	159	133	95

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[1] Estimate of Ratables in New Jersey taken by Legislature January 25, 1794.
[2] U. S. Census.
[3] U. S. Census.
[4] U. S. Census. Total only.
[5] Kirkbride's New Jersey Business Directory, 1850-51. Returns probably incomplete.

Number of Tan Vats in New Jersey

(By Counties as Constituted During Years Mentioned)

County	Number Tan Vats 1821[6]	Number Tan Vats 1830[7]
Bergen	142	127
Burlington	397	350
Cape May	...	...
Cumberland	90	6
Essex	376	223
Gloucester	146	158
Hunterdon	472	524
Middlesex	352	243
Monmouth	341	238
Morris	212	215
Salem	117	119
Somerset	254	211
Sussex	299	227
Warren	...	235
Totals	3,198	2,876

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[6] Votes and Proceedings, New Jersey General Assembly. Figures as given.
[7] Gordon, Thomas F. Gazetteer of the State of New Jersey. Trenton, 1834.

When there were 248 tanneries in New Jersey in 1810, the number of hides tanned was 46,515; number of calfskins tanned, 20,320; pounds of leather produced, 9,000; number of sheepskins, 3,674; leather unnamed, 123,482; value of products, $386,187; pairs of boots, shoes and slippers made, 342,793; and value of the boots, shoes and slippers, $427,685. The county distribution of these activities is shown by the following table:

New Jersey Tanneries and Their Products

(1810 Census)

County	Number Tanneries	Hides	Calf-skins	Sheep-skins	Leather unnamed	Leather by weight reduced to pounds	Value Dollars
Essex	....	....	....	....	....	....	......
Sussex	26	....	....	....	51,970	....	51,970
Hunterdon	45	12,310	4,760	600	....	....	71,370
Burlington	26	....	....	....	44,600	9,000	44,600
Monmouth	18	5,000	445	....	....	....	25,450
Morris	38	6,025	2,325	....	....	....	34,775
Middlesex	17	6,200	4,850	....	....	....	39,625
Gloucester	13	4,450	1,420	....	....	....	23,805
Somerset	30	....	....	....	26,912	....	26,912
Salem	9	3,300	1,950	1,560	....	....	20,935
Bergen	20	6,230	4,460	1,514	....	....	35,537
Cumberland	6	3,000	110	....	....	....	11,208
Cape May	....	....	....	....	....	....	......
Totals	248	46,515	20,320	3,674	123,482	9,000	386,187

The figures in the following table showing leather statistics for New Jersey, from the 1840 federal census, differ somewhat from the figures given in Laws of New Jersey, 65th Session, 1840-41. In the latter source, the most significant differences are in the number of tanneries, 228, and capital invested, $525,728. In addition to the tanneries, according to the state figures, there were 416 other manufacturers of leather, saddleries, etc., whose manufactured articles were valued at $1,579,546 and which had capital invested to the extent of $637,940. The differences may have been due to a revision of the federal figures first issued.

1840 Leather Statistics for New Jersey

(Sixth U. S. Census)

County	Number Tanneries	Sides of Sole Leather Tanned	Sides of Upper Leather Tanned	Number of Men Employed	Capital Invested Dollars
Atlantic	....	....	....	....	......
Bergen	9	2,700	4,723	16	5,673
Burlington	7	6,400	4,700	21	33,000
Cape May	....	....	....	....	......
Cumberland	4	300	3,410	31	6,200
Essex	10	4,200	12,320	476	40,000
Gloucester	4	525	655	26	5,000
Hudson	....	....	....	....	......
Hunterdon	23	5,273	5,367	82	35,875
Mercer	13	10,960	2,690	154	55,900
Middlesex	6	1,650	3,300	35	18,000
Monmouth	15	6,348	7,625	70	44,130
Morris	19	2,992	8,880	55	54,450
Passaic	7	2,400	3,690	19	25,100
Salem	4	3,100	2,332	15	28,000
Somerset	14	2,572	14,070	28	17,000
Sussex	15	2,970	7,130	32	29,800
Warren	9	5,200	5,870	30	17,600
Totals	159	57,590	86,762	1,090	415,728

In 1850 the number of tanneries in New Jersey was 133 and the number of tanners and curriers, 363. The amount of capital invested was $572,857; value of raw materials, $423,537; male hands employed, 405; monthly wages, $8,946; value of product, $724,466.[8]

For 1860, New Jersey had 5 bark grinding establishments with an invested capital of $9,500. The value of their raw material was $5,970; the number of hands employed, 6; their annual cost of labor, $1,500; and the annual value of their product, $13,888. As for leather in 1860, there were 83 establishments in addition to 4 producing morocco and 9 producing patent leather. The 83 firms had 467 employees; their invested capital was $723,900, and the annual value of their product was $1,339,178. The 4 morocco firms employed 141 persons and they had $108,000 invested, with the annual value of their product being $384,000. The 9 patent leather establishments employed 720 persons, had $912,000 invested, and the value of their product was $1,707,000.[9]

From early times, Newark has been noted for its leather industries. According to Shaw, the Town Records of June 5, 1676 reveal that Deacon Lawrence was chosen to be the Sealer of Leather "according to the order of the Gen'l Assembly." In 1698 Azariah Crane asked for permission to set up a tanyard "at the front of John Plum's home lott, out of the Commons." About that time Hans Albers and Hugh Roberts were tanners. Another tannery was built by the Johnson family, and there was a Cumming, a Baldwin, a Combs, and a Curry. Moses N. Combs started about 1780. In 1830 there were 13 tanneries with 103 hands. By 1835 there were 150 men employed in tanning and currying. By 1860 there were 25 establishments tanning leather and 5 tanning morocco leather. In addition, there were 21 curriers and 15 making patent leather. Altogether their employees numbered 1,100. After 1875, tanneries began to consolidate, and by 1880 there were in Newark 39 establishments where hides and skins were tanned and curried. The output at this time, however, doubled that of 1870. In 1880 there were 343,549 hides tanned and curried and 1,618,608 skins dressed. The amount of oak bark used was 10,083 tons, and of hemlock bark, 10,992 tons. In addition, 945 tons of sumac were used in the tanning operations.[10] According to the "New Jersey Industrial Directory, 1956-57" there were 42 firms in Newark engaged in tanning, currying, and finishing hides and skins, manufacturing finished leather products, embossing and japanning leather, etc.

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[8] Morfit, Campbell. *The Arts of Tanning, Currying and Leather Dressing.* Phila., 1852.

[9] 8th U. S. Census of Manufactures, 1860. Washington, 1865.

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[10] Shaw, William H. *History of Essex and Hudson Counties, New Jersey.* Phila., 1884.

CHAPTER XI

Tanners' Supplies, Leather, Hides, Etc.

At Princeton on December 10, 1777, an act was passed regulating and limiting the prices of various articles to prevent "forestalling" (to buy up merchandise secretly with the intention of raising prices), "regrating" (to buy up large quantities of goods for resale, near where purchased, at higher prices), and "engrossing" (to buy large quantities so as to control the market). Among the items were raw hides, not to be sold above 7 pence per pound; "soal" leather, not to be sold for more than 3 shillings per pound; and upper leather, the top price of which was 5 shillings per pound. Men's neat leather shoes, the common sort, were fixed at 17 shillings, 6 pence, and women's shoes of similar quality, at 14 shillings. In the "New Jersey Gazette" of March 24, 1779, Cleayton Newbold of Mansfield, Burlington County, advertised for sale "a few barrels of best tanners oil extracted from blubber." Matthias Denman, of Springfield, advertised in "The New Jersey Journal" of November 30, 1779 leather breeches in exchange for cash or country produce, and in the "New Jersey Gazette" of April 5, 1780 Abraham Lott, of Trenton, wanted to sell "soal leather" for "ready money."

Many newspapers, such as the "True American," "The New-Jersey Eagle," the "New Jersey Mirror," the "Village Herald," the "New Jersey State Gazette," the "Princeton Whig," the "Pennsylvania Gazette," after 1800 carried advertisements of interest to tanners and curriers. The firm of James & Cortland L. Parker and Joseph Marsh, of Perth Amboy, advertised in 1806 and 1807, Spanish hides from Curracoa and Porto Cavello. One lot, from Curracoa, of 1,800 hides of excellent quality and 1,200 dry and salted hides came in on the schooner Frances Lewis. Around 1820, New Brunswick sloop owners charged for transportation between New York City and New Brunswick, 6 pence per hide for green hides, 2½ pence per hide for dry hides, and 1¼ pence for a side of sole leather. In 1822 John Potts of Trenton advertised leather, sole leather, wax upper, block grain, Cordivan, calfskins, sheepskins, boot legs and boots for sale.

In 1823 James Black, of Newark, wanted to sell a "large and excellent marble currier's table"; Charles Stockton, of Mount Holly, had hides and skins, sole leather and sheepskins for sale or exchange for hides and skins; and A. P. Brittingham, of Tuckerton, held a public sale on April 26, 1823 at the Union Hotel, of hides from Port-au-

Prince, from the schooner Rover which had put into Tucker's Island in distress, and also the schooner itself.

John S. Letson, in "The Fredonian" of March 27, 1825, gave notice that he had opened a retail leather store at his old stand on Dennis Street, New Brunswick, two doors from Smith and Ackerman's corner, where he was offering for sale harness and bridle leather, sole leather, etc. Out-of-state leather dealers advertised in New Jersey papers. Thomas Everit & Sons, of Brooklyn, on July 1, 1825 offered in "The New-Jersey Eagle," 2,000 salted cowhides from Calcutta. David Kirkpatrick, of 21 South Third Street, Philadelphia, from his hide, oil and leather store, offered in the "Princeton Whig" of December 6, 1837 the following articles to tanners "upon most accomodating terms,": "3,200 LaPlata hides, 3,000 Chili hides, 1,000 Rio Grande hides, 800 LaGuyra hides, and 500 Pernambuco hides," all of best quality. In addition, he had 2,500 heavy, green, salted "Patna Kips" for upper leather and 100 barrels of the best "Straits and Bank oil."

Charles T. Shipman, a large leather dealer in Newark, advertised extensively during April and May, 1826, in "The New-Jersey Eagle." From his store on Market Street he offered for sale 6,000 African hides, 700 dry African hides, 500 salted African hides, 500 salted Calcutta kips, 400 dry Calcutta kips, 250 sealskins, in the hair, for trunks, 300 upper leather hides, 1,000 sides of hemlock sole leather, 1,000 sides of oak-tanned leather, 1,000 sealskins in the rough, 800 kip skins and 100 dozen calfskins, finished and unfinished, 50 dozen cochineal Morocco, 50 dozen black Morocco, and 400 dozen lining skins.

An unknown currier advertised in "The New-Jersey Eagle" of April 14, 1826 for an apprentice 15 or 16 years old, to apply to the newspaper office. Isaac Saunders, of Woodbury, wanted hides and calfskins delivered to the store of James Saunders in 1828, and R. McNeely & Son in the "New Jersey State Gazette" of March 31, 1832, wanted to sell Buenos Ayres of first quality, which he had just received. In "Kirkbride's New Jersey Business Directory for 1850-51," Joseph Shreve, merchant of Long-a-coming, New Jersey, who sold dry goods, earthenware, groceries and medicines, also had on hand constantly for sale "Picker, Belt and Lace Leather, also Calf Skin, Upper, Sole, Harness and Bridle Leather." At this time there was a firm, "Lewis & Shreeve," running a general store in Medford.

From 1839 to 1850, according to B. T. Pierson's "Directories of the City of Newark," there were from 10 to 18 leather and oil dealers and from 3 to 5 morocco dressers constantly in business on Market and Washington streets, mostly on the former.

From the tanning and currying trades and the other leather crafts, we get such family and place names as Tannenbaum, Tangard, Tanner, Tanzman, etc., Currey, Curry, Currie, Currier, Shoemaker, Skinner, Leatherman, etc., Tanner's Run, once Tanhouse Run, a stream on the southwest border of Burlington, Tanner's Run, a stream mentioned in the "Pennsylvania Gazette" of November 20, 1766 as being in Great Egg Harbor Township, Gloucester County, Tansboro, a village in 1832 in Gloucester Township, Gloucester County, on the road from Long-a-coming to the Great Egg Harbor River, 15 miles southeast of Woodbury.

In the December 5, 1815 issue of "The Centinal of Freedom" (Newark) a notice called attention to a little book entitled "The Practical Brewer and Tanner" by Joseph Coppinger of New York City. It was intended for the use of farmers so that they could do their own brewing and tanning, and it was published at 45 John Street, New York, where Robert Donaldson, who was either a printer or bookseller or both, lived.

CHAPTER XII

Diseases of Tanners

In 1685, Charles Gordon, a resident of New Jersey, wrote to his brother as follows: "If you desire to come hither yourself you may come as a Planter or Merchant, but as a Doctor of Medicine I cannot advise you; for I hear of no disease here to cure but some agues, and cutted legs and fingers, and there is no want of empirics for these already; I confess you could do more than any yet in America, being versed both in chirugery and Pharmacie, for here are abundance of curious herbs, shrubs and trees, and no doubt medicinal ones for making of drugs, but there is little or no employment in this way." [1]

Apparently there was little need for Aesculapius in the New Jersey colonies during the seventeenth and eighteenth centuries from the standpoint of industrial medicine. The population was not large, manufacturing was done in the home, workers were not numerous and occupational diseases, if there were any, were not recognized as such, "the Calamity of Diseases being incident to every Species of Being" (regardless of occupation), as Doctor William Clark of Freehold wrote in 1750. So in order to determine if tanners were subject to specific maladies as a result of their occupation we shall have to go back to Europe of the seventeenth century and consult "A dissertation on endemial diseases; . . . together with a treatise on the diseases of tradesmen . . . The first by . . . Frederick Hoffman (1660-1742) . . . The second by Bernardino Ramazzini (1633-1714) . . . Padua, 1700 . . . newly translated with a preface and an appendix by Dr. James," which was published in London in 1746.

In Chapter XVI, Ramazzini wrote "Of the Diseases incident to Oilmen, Tanners, and other such Trades," saying that the shops of oilmen, tanners, fiddle-makers, butchers, fishmongers, sellers of salt-meat, cheesemongers and tallow-chandlers all affected the nose and made such tradesmen earn their money with "uneasiness." When he ventured into such places they turned his stomach and he could not bear the nauseous smell without a headache and some inclination to vomit. For this reason, he wrote, such tradesmen were justly prohibited from doing business in the cities and were confined to the suburbs and outskirts. Of tanners and leather-dressers in particular, "who steep the Hides of Animals in Pits with Lime and Galls, and not only so, but tread them with their Feet, wash and cleanse them, and smear them with tallow," he wrote: "By virtue of the perpetual Stink and foul Exhalations their Complexion becomes cadaverous, their Bodies are puffed up, they breathe with Difficulty, and almost all of them are splenetic. I have known a great many of this Trade hydropical; for since they spend almost all their Time in a moist Place, and an Air defiled with the foul Exhalations which rise from the half-rotten Hides, it is impossible but that the Store-houses both of the vital and the animal Spirits must be tainted, and the whole Oeconomy of the Body perverted."

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[1] Gordon, Maurice Bear. *Aesculapius Comes to the Colonies.* Ventnor, N. J., 1949.

Ramazzini had observed that neither spurring nor whipping would make some horses pass by such places, and he said that in ancient Rome "the Work-houses of sordid Trades, and particularly those of Tanners, were all in that Quarter which lay beyond the Tyber." To the class of tanners he added the makers of "Cat-gut-strings, or Strings for musical Instruments; for they are liable to the same Distempers, as being obliged to live in moist and stinking Places and continually imployed in handling, washing and opening out the Intestines of Animals. Accordingly we see that such Workmen are commonly wan in the Face and cachectic, and their Legs are swelled."

CHAPTER XIII

Some New Jersey Tanneries and Their Locations

Although we have attempted to search all sources known to us for definite records of early tanneries, we know that the following list is not complete. Many small local tanneries did not advertise in newspapers. Many were operated only part time in connection with farming. And we are sure that some sources have eluded us. The date refers to the year in which they advertised or the year in which they were active as recorded by various persons. Although from 1664 to 1850 some 137 tanneries are recorded, the years are not consecutive and many gaps occur during the 187-year period. It is not known how long each establishment was in business. From 1664 to 1698 (35 years) 16 establishments are recorded. From 1724 to 1791 (68 years) 44 are recorded, and from 1800 to 1850 (51 years) there are 77 records. In "Kirkbride's New Jersey Business Directory, 1850-1851" there are 95 tanners and curriers listed, but many of these are individuals and not firms and some are leather dealers. The list is useful, however, in supplying a partial account of many individual tanners and in indicating the one-time importance of a rural activity that has disappeared.

1664. OGDEN, JOHN, Elizabeth. John Ogden, one of the proprietors, introduced the art of tanning into Elizabeth, where it was carried on by several of that name. (Bishop; Raum.)

1670. ROBERTS, HUGH, Newark. Tannery located on Hugh Roberts Brook. ("Settlement of Newark," Coll. of N. J. Hist. Soc., 1866.)

1675. ELDREDGE, JOHN, Salem, West Jersey. Tanner. (N. J. Archives, 1st Ser., Vol. XXI.)

1676. WHITEHEAD, SAM'L, Elizabethtown. A woman "leather sealer" in 1680 expressed herself on the records as "willing that Sam'l Whitehead should settle among us provided he will supply the town with shoes." (Raum.) Samuel Whitehead was a shoemaker.

1684. WILLIAMS, THO., North Branch of Pennsauken Creek, West Jersey. Tanner. (N. J. Archives, 1st Ser., Vol. XXI.)

1689. IRESON (IRONS), JOHN, Salem Town. Tanner. (N. J. Archives, 1st Ser., Vol. XXI.)

1688-9. SMITH, DAVID, Elizabeth Town. Tanner. (N. J. Archives, 1st Ser., Vol. XXI.)

1689-90. STACY, ROBERT. Tanner to Richard Bassnett of Burlington. (N. J. Archives, 1st Ser., Vol., XXI.)

1690. LAMBERT, THO., Nottingham, Burlington County. Tanner. (N. J. Archives, 1st Ser., Vol. XXI.)

1692. TYLER, WM., Salem Creek, Salem County. Tanner. (N. J. Archives, 1st Ser., Vol. XXI.)

1693-4. **Fretwell, Peter**, tanner to Daniel England, both of Burlington. (N. J. Archives, 1st Ser., Vol. XXI.)

1695. **Hutchinson, John**, Hutchinson's Manor, Burlington County. Tanner. (N. J. Archives, 1st Ser., Vol. XXI.)

1695-6. **Ellison, Wm.**, Woodbridge, East Jersey. Tanner. (N. J. Archives, 1st Ser., Vol. XXI.)

1695-6. **Hutchinson, Tho.**, Hopewell, Burlington County. Deceased tanner. (N. J. Archives, 1st Ser., Vol. XXI.)

1698? **Albers, Hans**, Newark. Tanner. (Shaw, W. H. "Hist. Essex and Hudson Counties," Phila., 1884.)

1698. **Crane, Azariah**, Newark. According to the minutes of the Town Meeting of Newark, January 1, 1697-8, a committee was appointed to determine if Azariah Crane could have land for a tanyard "at the front of John Plum's home lot, out of the common." If the committee agreed that Crane could have the land then he could enjoy it so long as he followed the tanning trade. ("Records of the Town of Newark"; Coll. N. J. Hist. Soc., 1864.)

1724. **Bassett, Stephen**, Acquakanonk (now Passaic). Tannery established by Bassett, a tanner from New York. He continued in business until his death, a period of nearly 50 years. ("Stories of New Jersey," 1938.)

1734. **Howell, John**, Haddonfield, purchased land from John and Elizabeth Estaugh. The deed gave him "full power to build Erect and make on the same such Dams and Sluices as shall be necessary for ye Raising water to a conveinient head or height for supplying with water all such Tan Pitts or Vatts as ye s^{d} John Howell shall think proper to make or plant thereon." In 1739 Howell sold the property to Isaac Andrews, tanner, who improved the property and mortgaged it for approximately four times what it originally cost him. In 1776 he died and his widow conveyed her right of dower in the premises to his executors, Mark Miller and Thomas Redman. At this time the mortgage and interest amounted to 636 pounds. After three years of trying to sell it, it was deeded to Charles Logan, who eight years later sold it to John Ward, tanner of Haddonfield, for 450 pounds. In 1811 John Ward and his wife sold the tannery to Samuel Brown, Jr., tanner and currier of Haddonfield, for $2,400. Several years later the property was sold to Thomas and Benjamin Borden, of Shrewsbury, N. J., who probably did not operate it as they shortly sold it to Samuel Allen, of Shrewsbury. Samuel Allen gave up the business because of ill health, and James White managed the business for a few years. By 1870 it was abandoned. (Carrie E. Nicholson Hartel.)

1747. **Moore, Thomas**, Moorestown. Tannery sold in 1747 to Joshua Bispham. In 1757 it was sold to John Heustis. In 1787 it was sold to Abner Peacock and his wife Isabella. They in turn sold it in 1793 to James Robinson, who carried it on for a long time. It was a large tannery supplied with cheap bark from nearby forests. It was located on the north side of Main Street. After Robinson's death the business was carried on by William Boradaile and Samuel H. Edwards in 1822. They were succeeded by Isaac Saunders, who after a short time sold it to Amos Stiles. The buildings caught fire in 1838 and the land remained in Stiles' hands until 1856. (Woodward & Hageman.)

1750? .... **Barrack**, Spring Brook, New Brunswick, between Albany and Church Streets, had a tannery. (Wall.)

1750. **Biles, Benjamin**, Trenton, offered for sale or rent his property on the west side of King Street near the middle of town. It consisted of a tanyard, a lot of 2⅓ acres, a good bark house, a millhouse, a beam house, a bark mill, a stone currying shop, a leather house, vats enough to tan 800 hides. There was a constant stream of spring water running through the yard. In addition, there was a good hay house, stable, and chaise house and a good dwelling house adjoining the tanyard. Benjamin Biles lived on the premises. (Pa. Gazette, Aug. 9.) In 1765 Mr. Biles still wanted to sell, at which time Stacy Potts was the tenant, and Mr. Biles was living at Hermitage, near Trenton. The tanyard then consisted of 36 vats and handlers, 2 large leaches, 5 limes, 2 bates, one good water pool and buildings for tanning and currying. (Pa. Gazette, May 30, 1765.) In 1745, when Trenton was created a free borough, Benjamin Biles was one of the 16 councilmen. On March 31, 1757, Biles along with others signed a petition to the General Assembly for the building of a barracks so that the soldiers of several companies would not be quartered on them day and night. (Hist. Trenton.)

1750. **Moelich, Johannes, and Jacob Kline.** Tannery on Rockaway River, Readington Township, Hunterdon County, on a 400-acre farm belonging to Johannes Moelich. This farm was located along what was later the Central Railroad of New Jersey midway between White House and North Branch stations. The property later was owned by Jacob Kline, who with his sons and grandsons operated a tannery for more than 75 years. (Schmidt, Hubert G., ed. "Lesser Crossroads," New Brunswick, 1948.) (See Moelich, 1751.)

1751. **Moelich, Johannes, and Aaron Moelich.** Tannery on Peapack Brook, Bedminster Township, Somerset County. Johannes Moelich bought property in Bedminster Township in 1751 and later with his son Aaron engaged in the tanning business. In 1786 Aaron bought from his brother-in-law Jacob Kline a Negro master tanner and currier named Yombo. (Schmidt, Hubert G., ed. "Lesser Crossroads," New Brunswick, 1948.)

1758. **Quick, Francis**, Kingwood, West New Jersey, advertised for a person who understood the currying and tanning business well. (Pa. Gazette, June 1.)

1760. **Devan, John**, Elizabeth-Town, "Skinner and Leather Breeches-Maker, from New York." Devan started in business "about two miles from the Court-House on the Post Road to Woodbridge, opposite Captain Ephraim Terril's." (N. Y. Mercury, March 24, 1760.)

1764. **Ellis, Joseph**, Gloucester, offered for rent on a 7-year lease, a tanyard in the town of Gloucester within four miles of Philadelphia. "Three Negro men" were to be let with the yard. They understood the business. (Pa. Gazette, April 5.)

1765. **M'Lean, Peter**, Perth Amboy, offered for sale a house and lot on Smith Street and a tanyard with a run of water through it. It was particularly suitable for a shoemaker or tanner who might "fall into the best business in New Jersey." (N. Y. Gazette or W. Post Boy, Feb. 28.)

1765. **Potts, Stacy**, Trenton. (See 1750, Benjamin Biles.) Stacy Potts rented the tanyard of Benjamin Biles at this time but the beginning of his tannery is unknown to us. (See 1778. Stacy Potts entry.)

1767. **Guest, Henry**, New Brunswick, refers to himself as a tanner in a letter to "Mr. Gaine," suggesting the use of leather as a roofing material, that was printed in "The New-York Mercury" of Oct. 12, 1767. In 1763 Henry Guest was an alderman of New Brunswick. In 1784 he was one of the directors named in New Brunswick's charter. (Wall, "Chronicles of New Brunswick.")

1767. ...., Elizabeth-Town. "Last Tuesday se'ennight, a Tanner's Bark-House at Lyons Farms, in Elizabeth-Town, having made a small

Fire in it to warm the People at Work, in the evening the Master put it out himself, as he thought, with Snow, but when he got up in the Morning, he found the Bark-House, with a good Quantity of Bark, and upwards of 30 Hides in it, all reduced to Ashes, and neither he nor any of his Neighbors saw or heard any Thing of the Fire." (Pa. Chronicle, March 2, 1767.)

1768. Langdale, John, Haddonfield, offered for sale a good house, tanyard and an improved lot of four acres. It was located in the best place for obtaining the best bark, hides, and large Jersey calfskins in great numbers. (Pa. Gazette, May 5.) Langdale was in business in 1766, as William Smith of Philadelphia sold saddler's and shoemaker's leather tanned by Langdale. (Pa. Jour., Aug. 7, 1766.)

1768. Wilson, Hugh, Gloucester County. Tanner. Sheriff Samuel Blackwood in "The Pennsylvania Gazette" of Feb. 11, 1768 advertised the escape of two prisoners from jail. Hugh Wilson, a tanner born in Ireland, about 30 years old, was one of them. A reward of 6 pounds was offered for him.

1770. Crow, John, Perth Amboy, offered for sale a four-acre lot bounding on the river, together with a dwelling house, currying shop, shoemaker's shop, bark house, beam house, and a tanyard, togther with a dwelling house. (N. Y. Jour. or Gen. Advertiser, March.) This may be the property offered in 1765 by Peter M'Lean.

1770. Meghee, Saftey, Bordentown. The executors of the late Saftey Meghee advertised a public sale on March 22, 1770, of a house, two lots of land, on one of which was a good tanyard, tan house, currying shop and shoemaker's shop with tools for carrying on the currying and tanning business. (Pa. Chronicle, Mar. 5-12.)

1773. Blum, Frederick, Hope, was the tanner for the Moravian community. The tannery was built of brick and logs in 1773 at the top of a streambank to the southwest of the gristmill. In 1907 a few remains of the tannery were visible. In 1955 only some foundations were visible. ("The Moravian Contrib. to the Town of Hope," N. J., 1955.)

1775. Baker, Daniel, Westfield Twp., Union County. Tanner and currier. Was in business until his death January 15, 1776. (Clayton.)

1776. Andrews, Isaac, Haddonfield. The estate of Isaac Andrews was offered for sale. It consisted of a lot of three acres, on which there was a two-story brick house, kitchen, hay house, garden, orchard and a "long accustomed" tanyard, mill-house, bark house and other appurtenances for carrying on a currying and tanning business." (Pa. Gazette, Mar. 20.) (See 1734, John Howell.)

1776. Ogden, Timothy, Elizabeth, Union County. During the Revolutionary period, Timothy Ogden operated a tannery located at what in 1882 was Elizabeth Avenue near Spring Street. (Clayton.)

1776? .... Large tannery on east side of Wood Street, south of Pearl, in Burlington. One or more of Burlington's early tanneries was located on a little stream known as "Tanners or Tanhouse Run" which empties into the Delaware River west of the city. (DeCou.)

1778. Potts, Stacy, Trenton, offered to rent on reasonable terms, with or without stock on hand, a large tanyard with 64 vats, 5 limes, 2 water pools, a bark house holding about 300 cords of wood, a good currying shop, a skin-dresser's shop and every convenience for carrying on the business of tanning, currying, skin-dressing and breeches-making very extensively. Tanned leather was given in exchange for good bark. (N. J. Gazette, April 29.) This tanyard was the one owned by Benjamin Biles in 1765, at which time Stacy Potts was his tenant. (See 1750, Benjamin Biles.)

The tanyard of Stacy Potts in 1778 was near Warren Street on the banks of Petty's Run. St. Mary's Cathedral is now on the site of this tanyard. Stacy Potts was a grandson of Thomas Potts, a Quaker who came from England with Mahlon Stacy in the "Shield." This ship arrived at Burlington in the winter of 1678. The Stacy and Potts families intermarried. Stacy acquired considerable property. He lived on King Street where St. Mary's Cathedral stands. Colonel Rall, commander of the Hessian troops, lived in Potts' house and died there as a result of battle wounds. In addition to his tannery, Potts ran a steel works. In 1766 Potts was secretary of the Trenton Library Company. In 1777 he was fined 100 pounds for refusing to take the oath of patriotic allegiance, although his personal sympathy was on the side of the patriots. Apparently this did not operate against him. He continued to live in Trenton, and in 1806 he was elected Mayor of Trenton, holding that office for eight years. On February 10, 1781, Stacy Potts along with 19 other citizens formed an association for the purpose of building a schoolhouse. He also joined the company organized to help John Fitch in his steamboat experiments. His frame house was leased for one year, on Sept. 22, 1784, for the official home of the president of Congress when the federal capital was located in Trenton. Potts was a director of the Trenton Aqueduct Company in 1811, and when the State Bank was opened in 1813 on State Street between Warren and Broad he was one of the commissioners. His tannery was on Tan Yard Alley, which later became a part of West Hanover Street. ("Hist. of Trenton, 1679-1929," Princeton, 1929.) In his 1778 advertisement, Stacy Potts also offered for rent "a large two-story building, lately occupied for file-making, brass-foundery, and sundry branches of cutlery, with a convenient black-smith's shop; all of which may be entered on immediately." He intended to go out of business. An advertisement in the "New Jersey Gazette," Dec. 13, 1780, stated that he had a quantity of harness, consisting of "coilers, blind-bridles, collars and haimes," also shoes and sole leather to exchange for hides.

1779. AYRES, HELBRIDGE, Township of Stoe Creek. One-half a tanyard listed in Rateables of Township of Stoe Creek. (Corresp. from Elena J. Darling.)

1779. BEARS OR BEERS, DANIEL, Mendham Township. Listed in Mendham Township Rateables as a tanyard. (Corresp. from Helen M. Wright.)

1779. BIVANS, JOSEPH, Township of Stoe Creek. Tanyard listed in Rateables of the Township of Stoe Creek. (Corresp. from Elena J. Darling.)

1779. DENMAN, MATTHIAS, Springfield. Offered leather breeches for sale for cash or country produce. (N. J. Journal, Nov. 30, 1779.) May have been a tanner.

1779. HUDSON, WILLIAM, Mendham Township. Tanyard listed in Mendham Township Rateables. (Corresp. from Helen M. Wright.)

1779. LOSEY, JAMES, Mendham Township. Tanyard listed in Mendham Township Rateables. (Corresp. from Helen M. Wright.)

1779. MCDANIEL, HUGH, Mendham Township. Tanyard listed in Mendham Township Rateables. (Corresp. from Helen M. Wright.)

1779. RIGGS, PRESERVE, Mendham Township. Tanyard listed in Mendham Township Rateables. (Corresp. from Helen M. Wright.)

1779. THOMPSON, DANIEL, Mendham Township. Tanyard listed in Mendham Township Rateables. (Corresp. from Helen M. Wright.)

1779. TINGLEY, NATHANIEL, Mendham Township. Tanyard listed in Mendham Township Rateables. (Corresp. from Helen M. Wright.)

1780. COMBS, MOSES N., Newark. Began tanning. (Shaw, W. H., "History of Essex and Hudson Counties, New Jersey." Phila., 1884.) Around 1790 he opened a large shoemaking shop. (Stories of New Jersey. New York, 1938.)

1780. LOTT, ABRAHAM, Trenton. Offered sole leather for sale. (N. J. State Gazette, April 5, 1780.) May have been a tanner.

1781. GREEN, CALVIN, Hanover, Morris County. Calvin Green began to learn tanning with John Smisson (or Smithson, or Smithsin) in 1781, while he also did farm work. Green dug tan vats and apparently worked at tanning with Smisson through 1783. Then he learned tanning, currying and shoemaking from Timothy Cooper Wards. Green's father paid Wards 10 pounds and Green found his own clothes. On April 11, 1784, Green carried his bench and tools to Wards' place and started to work. In 1785 Green became proficient in shaving leather, currying, tanning and shoemaking. After April, 1786 he engaged in tanning with his wife's brother, Noah Beach, but Beach later withdrew and in 1794 Green gave up tanning for work on his farm. (Calvin Green's "Diary.") Calvin Green was born in Hanover, 1765, and died there in 1847. His brother, Ashbel Green, was the eighth president of the College of New Jersey (Princeton University).

1781. SMITHSON (OR SMISSON, OR SMITHSIN), Hanover, Morris County. (See 1781, Green, Calvin.)

1783-1851. CASE, near Flemington. The Cases over the period indicated did custom work. Hides were purchased from High Bridge, Readington, Frenchtown. (Hubert G. Schmidt, "Econ. Hist. of Hunt. Co., N. J.," New Brunswick, 1946.)

1783. WARDS, TIMOTHY COOPER, Hanover, Morris County. (See 1781, Green, Calvin.)

1785. HUNT, JONATHAN, Rosedale, Mercer County. Carried on a tannery business on the farm of Capt. F. W. VanKirk during the Revolution. It was abandoned in 1785. (Woodward & Hageman.)

1786. BEACH, NOAH, Hanover, Morris County. (See 1781, Green, Calvin.)

1789. DOREMUS, CORNELIUS, North Bergen Township, Hudson County. Tannery started in 1789 and carried on until about 1817. Tanyard located a rod or two north of the Three Pigeons on east side of Bergen Turnpike. Building was of wood and some of its timbers were still standing as late as 1855. (Shaw, Wm. H., comp. "History of Essex and Hudson Counties." Phila., 1884.)

1790. TYLER'S TANNERY, Salem, Salem County. One of the early tanneries in Salem was a small outfit started by a man named Ware. Later it was sold to one Bevan, and then to John Tyler. It remained in the Tyler family from 1790 up to about 1880 at least. Around 1880 W. Graham Tyler was the owner. Its capacity at that time was from 2,000 to 2,500 hides per year, and the capital invested was $27,000. (Cushing and Sheppard, "Hist. Counties Glouc., Salem & Cumb." Phila., 1883.)

1791. WADE, JONAS, Connecticut Farms, conducted a tanning and currying business. ("Early Industries of Union County," Proc. Union Co. Hist. Soc., 1921-23.)

1793. SHIPPEY, JOHN. His tannery was located at Raritan Landing near New Brunswick. It consisted of a complete bark mill, bark house, 24 vats and handlers with planks enough for 10 or 12 more and all the necessary tanning utensils, when it was offered for sale in 1793. (The Guardian, August 7, 1793.)

1800. BALLINGER, JOSHUA, Medford Township, Burlington County. Built a tannery before 1800 on a farm owned in 1882 by Micajah R. Wills south of his house in Medford Village. Out of existence by 1850. (Woodward and Hageman.)

1800? CARMAN'S TANNERY, Bordentown. This was located on the east side of Second Street near a stream which emptied into Crosswicks Creek. (Magee, James D. "Bordentown, 1682-1932.")

1800. DAVENPORT, JOHN, Pluckemin, Somerset County, who came to America from England, settled in Pluckemin in 1800, opened a general store and bought a farm near the village and repaired and enlarged the tanning and currying works on the place. He died in Pluckemin in 1830, aged 52 years. (Snell.)

1800. FOWLER, SAMUEL, Yardville, Hamilton Township, Mercer County, established a tannery about 1800. It was acquired by others and was abandoned about 1860. (Woodward and Hageman.)

1800. HARDENBERG AND DUNHAM, New Brunswick, had a large tannery of 61 vats, 2 buildings containing a beam room, bark mill, currying shops and a storeroom with a capacity of 100 cords of tan bark. (Newark Gazette, April 1.)

1800. MCHENRY, MATTHEW, Mount Holly, Burlington County. Before 1800 Matthew McHenry operated a small tanyard in the rear of where Doran's jewelry store was located in 1882, on the west side of Main Street. (Woodward and Hageman.)

1800? MOORE'S TANYARD, Bordentown. This was located on the south side of Walnut Street just below the present (1932) war memorial. Was probably in existence between 1776 and 1800 or later. (Magee, James D., "Bordentown 1682-1932.")

1800. ...., Tansboro, Winslow Township, Camden County. Tansboro was settled soon after 1800. One of its first industries was a tannery. Cornelius Tice started a tanyard nearly opposite the tavern. Tanyard carried on for a number of years by Josiah Venable. John Cain and Montgomery Reading were later tanners. There were only 6 vats and around 1856 the business was discontinued. (Prowell.)

1800. ...., Westfield Village, Union County, had one tanner and currier in 1800. (Clayton.)

1801. FREEMAN, DANIEL, Essex County. Tanning ledger of Daniel Freeman from 1801 to 1806 in Library of Rutgers University.

1802. WRIGHT AND POTTS, Trenton, advertised for two apprentices to learn tanning and currying. (True Amer., Feb. 9.)

1805. ELDER, THOMAS, Bloomsbury, Hunterdon County, offered a tanyard to let "on an improving lease" for a term of years. In this tanyard the vats were all filled by spouts from the forebay of the mill. Bark was available on reasonable terms. There was a ready sale for leather. The yard was on the "Musconitkong" River near the village of Bloomsbury about six miles from the Delaware River. (True Amer., April 29.)

1805. ROSE, JOHN, Frankford Township, Sussex County, built a tannery around 1805. Later it became the property of Reuben Westbrook, and then it passed to Samuel A. Evert who sold it to Wm. Mattison in whose possession it was around 1880. It was enlarged by Mr. Mattison and had a capacity of 1,500 hides and 1,500 calfskins yearly. Local bark was used, and New York was the market for leather. (Snell.)

1806. BARKER, JOSHUA, Upper Freehold Township, Monmouth County, offered his tanyard for sale. It was located on Shrewsbury Road, eight miles from Allentown and twelve from the Court House. The lot contained a two-story dwelling, a pump by the door and a stable with room for four horses, a bark and mill house 45 feet long by 20 feet wide, 12 vats, 4 handlers with limes and bates in proportion. A stream of water ran through the lot. (True Amer., Feb. 3.)

1806. BISPHAM, THOMAS, Moorestown, Burlington County, owned and operated a tannery in the western part of Moorestown, west of Union Street, before 1806. Bispham sold it to James Black, who in turn sold it to John Vaugn in 1810. In 1817 it was sold to Wm. Burroughs, who disposed of it to David Vanderveer in 1819. Thomas Vanderveer, son of David, carried on the business for a few years before moving to Monmouth County. The buildings remained in poor condition until 1879, when they were sold. (Woodward and Hageman.)

1806. COOK, JAMES, East Windsor Township, Mercer County, operated a tannery before 1806 in an old building near the site of Railroad House, Hightstown. This tannery was abandoned and a new one was built about 1812 by Robert T. Purdy, who continued in business to 1840 when R. R. Forman was admitted as a partner. Firm then called Purdy and Forman. Purdy withdrew in 1844 and Forman continued until 1846, when he retired. He was succeeded by his former partner, Robert T. Purdy, whose successor in 1849 was Joseph Rue. Two years later Rue was succeeded by Coward & Ely. Three years later the property was purchased by Kenneth Applegate, who had it torn down and moved away. (Woodward and Hageman.)

1806. WETHERBY, NATHAN, Barnsborough, Gloucester County, offered for sale a tannery situated about 2 miles from the landing and 5 miles from Woodbury. It was also 14 miles from Philadelphia. On the property there were a dwelling, outhouses, 10 vats and handlers, limes, pools and bates, also a convenient shop and mill house. Bark was plentiful and was from $4 to $6 per cord. Enough bark for tanning 300 hides would be sold with the premises, which occupied 1½ acres. (True Amer., Dec. 29.)

1807. SMITH, MATTHIAS AND PETER DOREMUS, West Bloomfield, built a tannery in 1807. A shop 20 x 17 feet built by David Riker cost $190. This tannery supplied leather to the shoemakers of nearby Newark. (Rawson.)

1808. PREST, MATTHIAS, Spottswood, Middlesex County, built a tannery about 1808. It was not successful and was abandoned a few years later. From about 1833 to 1853, George Lane had a tannery and shoe factory at Spottswood. (Clayton.)

1810. CHAMBERS, COL. DAVID, Cranbury, Middlesex County. This tanyard, late the property of Col. David Chambers, was offered for sale along with a house and lot and five other lots. The tanyard had 34 vats and all necessary buildings, all in good repair and well supplied with water. This tanyard was on 30½ acres in the center of the town, with a two-story house and an orchard of 100 trees. Another tanyard, owned by Col. Chambers, consisting of 27 vats and necessary buildings, well supplied with water, nearly in the center of the town, was also offered for sale. (True Amer., Sept. 10.) Clayton states that David Chambers' tannery, built in 1806, was finally sold to John Clark, who was succeeded by James Clark. Later the ownership passed to John Clark, the former owner. The other tannery owned by David Chambers was probably established by William Conover. This was sold in 1820 or thereabouts to Aaron Lane and later owned by Henry Van Deventer. Both tanyards went out of use about 1855. (Clayton.)

1810. **Havens and Simon Decker**, dec., Wantage Township, Sussex County. In "The Centinel of Freedom" for August 17, Margaret Decker, Admx., advertised a tanyard for rent. This had been occupied formerly by Havens and Simon Decker.

1810? **Lippincott, John**, tanner and currier, operated a tannery on Haddonfield Road a little east of "Pinehurst," home of Mr. and Mrs. Basil Hubert Cooper in 1929, in Moorestown. This tannery operated during the early years of the nineteenth century and was later run by George Matlack. (See 1820, George Matlack.) (DeCou.)

1811. **Barker, Joshua**, Upper Freehold, Monmouth County. Offered his tanyard for sale. It was located on the main road from Philadelphia to Long Branch in Upper Freehold. His property consisted of 20 acres, a good two-story dwelling house, "a pump of good water," stable, ice house, and tanyard with necessary buildings, etc., a currying and shoemaker's shop. Also a tenant house. Bark was plentiful and could be bought for from 4 to 6 dollars per cord. ("The Rural Visitor," [Burlington], March 11, 1811.)

1811. **Case, John**, Alexandria Township, Hunterdon County. Paul H. Mallet, prevost or agent, advertised for rent the well-known tanyard of the late John Case. A good stream of water ran through the yard and the property included a house, barn, wagon house, milk house, smoke house, 20, 40 or 60 acres of land in a state of cultivation, and all the buildings and accommodations necessary for tanning and currying on a large scale. John B. Allen was near the premises and Paul H. Mallet could be reached in Alexandria. (True Amer., Nov. 11.)

1811. **Vescelius Family**, Fairmount, Hunterdon County, conducted tanning business on a place later occupied by Philip Fleming, until between 1840 and 1850 when their large new tannery was built near Vescelius Corner. They had a large pond, and a giant water wheel, 18 feet in diameter, in their new tannery and sawed timber in connection with their tanning business. The tannery closed its doors about 1890. (Leigh.) Around 1850 John and Aaron H. "Verselus" were listed by Kirkbride as tanners in Fairmount.

1812. **Conover, Peter.** Tannery near Wycoff's Mills, on the Millstone River, Mercer County. After operating his tannery for some years, Peter was succeeded by his son, William Conover. This tannery was not in operation several years before 1883. (Woodward and Hageman.)

1813. **Gardner, Joseph K.** Tannery in Mendham Township, Morris County. Joseph K. Gardner was born in Bottle Hill, N. J., Dec. 9, 1785 and died June 13, 1842. He married Nancy Thompson, Sept. 6, 1805. He learned tanning and currying in Water Street, Mendham Township (now Brookside), Morris County, N. J. He moved to Bottle Hill (Madison) in 1824 and to New York in 1826, where he started in business. (See 1813, Charles Thompson.) He returned to Newark after his first wife's death in 1826 and married again. His death was due to a drowning accident in the Passaic River. ("The Genealogical Record of Leonard Headley of Elizabethtown, N. J." by Rev. A. J. Fretz, Milton, N. J., 1905, p. 171.)

1813. **Thompson, Charles**, Mendham Township, Morris County. Charles Thompson, a merchant, was interested in several business activities in the village of Mendham. In 1817 he bought half a tannery lot from his brother-in-law, Joseph K. Gardner, and in 1819 the other half. This lot was in Water Street, at the time, Mendham Township, now Brookside, Mendham. He was in partnership with Joseph K. Gardner from 1813 to some years later. The tannery location is shown on the "Morris County

Atlas" by Beers, 1868 (statistics of 1865). (Corresp. from Helen M. Wright.) (See 1813, Gardner, Joseph K.)

1816. BARRON, JOSEPH, Woodbridge. Offered for rent or sale a tanyard in good order and full of leather, with 50 or 60 cords of bark. (New-Jersey Journal, Feb. 6, 1816.)

1816. HALL AND BALDWINS, Bloomfield. In "The Centinel of Freedom" (Newark) for May 21, 1816, the following subscribers, Eliphalet Hall, Isaac Baldwin and Simon Baldwin inserted a notice as follows: "The Paper and Bark Manufacturing the Tanning and Currying establishment and Store lately occupied by Job S. Dodd at Bloomfield will in the future, be conducted by the subscribers under the firm of Hall and Baldwins." Black oak bark, rags, hides and skins were wanted.

1816. SHAFER, ABRAM, Stillwater village, Sussex County, together with his sons, Nathan and Peter, ran a store, gristmill, oil mill, tannery, blacksmith shop, and distillery. (Snell.)

1818. AGNEW, DANIEL, Lawrence (formerly Maidenhead Township in Hunterdon County). On March 28, this beautiful farm of Daniel Agnew, deceased, was sold at public auction. It was situated on the Branch Turnpike Road leading from Princeton to Trenton. There was a house and lot of about 5 acres near the farm. The tanyard was to be sold March 27. The yard was about one acre and contained a house, 30 vats, a bark house, beam house, and currying shop. (Fredonian, Mar. 19.)

1818. CAMMACK, HUGH, Newark. Currying shop opposite the market. Advertised for green hides in the hair. (The Centinel of Freedom, Nov. 24.)

1820. BORRADAILE AND EDWARDS, Moorestown, advertised that on and after January 1, 1821, five cents per pound would be paid for slaughtered hides. (N. J. Mirror, Dec. 27.)

1820. LAFETRA, JOSEPH, Eatontown, Monmouth County, built a tannery before 1820 on the southeast of Liberty Pole. It was rented later by Benjamin C. White, who continued there until around 1863 when he bought a new tannery lot and erected buildings. In 1872 the tannery was bought by Benj. Hathaway, and in 1876 after his death the property went to Borden B. Sherman of New York, who still owned it around 1884. (Ellis.)

1820. MATLACK, GEORGE, Moorestown, Burlington County, carried on a tannery business a short distance west of the town. It was burned about 1828. (Woodward and Hageman.)

1820. MIDDLETON, JEDEDIAH, Sharon, Washington Township, Mercer County, established a tannery as early as 1820 in the Monmouth County part of the settlement. It soon came under the management of Daniel Bowman, who operated it till 1840 when it passed to Alfred Conover, who owned it 35 years, or to 1875, at which time the buildings were bought by J. D. Hall and removed. (Woodward and Hageman.)

1821. BALDWIN & HENDERSON, Newark. Currying. Calvin Baldwin and George Henderson entered into a copartnership under the above name. They had on hand for sale a general assortment of sole and upper leather, etc. ("The Centinel of Freedom," Sept. 18.)

1821. BROADWELL, J. G., Springfield, offered the highest prices for bright, dry "sumack" in the stem for his "Morocco Manufactory." (N. J. Journal, July 17.)

1821. CLARK, SANFORD, Montague, Sussex County, having bought the tanyard of John Kelsey, deceased, advertised that he was going to continue the business of tanning and currying and would stock the yard or advance cash to a good workman, or rent the yard. The establishment was situated opposite the village of Milford, Pa., on the Jersey shore. A man with a very small or no family was preferred. (Palladium of Liberty, April 19.)

1821. DOUGHTY, SOLOMON, Basking Ridge, advertised for 50 tons of sumac for his Morocco Leather Manufactory. Morocco leather was offered for sale there or at 78 Dey Street, New York. ("Palladium of Liberty," June 28.) (See 1821, Thompson, John.)

1821. FIELD, JOHN, Mount Holly, Burlington County. In "The New Jersey Mirror" of November 24, 1821, Job Smith said that he was starting business at the tanyard formerly occupied by John Field, located nearly opposite Samuel Carr's, where he had an assortment of leather that would be bartered for hides and skins. (N. J. Mirror, Nov. 24.) (See Smith, Job, 1828.)

1821. ROBSON, JAMES, Moorestown. In the February 28 issue of "The New Jersey Mirror," Geo. Robinson, executor of the estate of James Robson, offered for sale the tanyard lately owned by him. There were "50 laying vats, 2 leeches, 43 handlers, 4 limes, 1 water-pool, and 10 baits." The bark house, two mills, currying shop, beam house and stable sufficient for six horses were all under one roof in a frame building 140 x 40 feet. The lot consisted of two acres. J. L. Gilpin was at the tanyard. (N. J. Mirror.)

1821. THOMPSON, JOHN, Thompson's Mills, Basking Ridge. He advertised for sumac delivered to his mills (Late Doty's). ("Palladium of Liberty," Aug. 23.) (See 1821, Doughty, Solomon.) Thompson may have operated a mill for grinding sumac.

1821. VAN DEREN, WM., Basking Ridge, offered for good oak bark delivered to his tannery, $4.00 for white oak, $5.00 for black and rock oak, and $6.00 for red oak, per cord. ("Palladium of Liberty," May 31.)

1822. LETSON, THOMAS, AND LEWIS G. LETSON, New Brunswick. "Thomas Letson having taken his son Lewis G. Letson into partnership with him in the Tanning & Currying business, the firm will be conducted under the name of Thomas Letson & Son at the old stand, upper end of Albany street." ("The Fredonian," June 6.) (See Letson, 1838.)

1822. PAXSON & CO., STACY A., Bloomsbury. Highest cash price given for hides and skins at the Bloomsbury tannery or at the store of Samuel Paxson & Sons, in Trenton. Bloomsbury was a suburb of Trenton. (True Amer., Nov. 2.) Stacy A. Paxson & Co., according to the "True American" of May 24, 1823, had just opened a leather store next to the store of Samuel Paxson & Sons on Warren Street, where they offered for sale an assortment of finished leather for cash or barter for hides and skins. They advertised for red chestnut and black oak bark for their tannery in 1825. (True Amer., May 14.)

1822. POTTS, JOHN, Trenton, offered for rent a tannery of 120 vats, with all necessary buildings. It included labor-saving machinery and a stock of excellent bark. Mr. Potts wanted to retire. (True Amer., Aug. 17.)

1823. BLACK, JAMES, Newark. Offered a marble currier's table for sale. (N. J. Eagle, Oct. 24, 1823.) May have been a currier.

1823. SHREVE, TANTON E., Wrightstown, Burlington County, advertised his tannery and a good assortment of leather at moderate prices. (N. J. Mirror, April 9.)

1823. STOCKTON, CHARLES, tanner and currier, opposite the fulling mill in Mount Holly, advertised for hides and skins and offered leather for sale. (N. J. Mirror, Oct. 29.)

1823. WADE, OLIVER, Springfield. This tanning and currying establishment lately occupied by Oliver Wade, deceased, was offered for rent by Elias Wade, Jr., the executor. There were 50 cords of tanner's bark on the premises. (N. J. Eagle, March 7.) Wade was in business in 1821, as he advertised in "The Palladium of Liberty" on August 16, 1821 for 100 cords of tanner's bark, either shaved or in the rough. He was willing to accept shaved black oak bark. In the March 11, 1823 issue of the "New Jersey Journal and Elizabeth-Town Gazette" the tannery was described as having 100 vats, a bark mill, bark house, currying shop, lime house, and kiln for drying bark. Connected with the establishment were an oil mill, smoke house, dwelling, scale for weighing hay, orchard, garden. Fifty cords of tanner's bark were on hand.

1823. WADE, OLIVER, Pompton. In addition to his Springfield tannery, Oliver Wade owned another one at Pompton, that was occupied by Marcus B. Douglass. This contained 40 vats, a water-operated bark mill, sheds to store 100 cords of bark, a currying shop, two dwellings, a store house, 20 acres of meadow land. Buildings and machinery were in good order. There were 100 tons of tanner's bark on the premises. This tanyard was offered for sale by Elias Wade, Jr., executor of the Oliver Wade estate. (N. J. Jour., Mar. 11.) Oliver Wade owned considerable other property at the time of his death.

1824. VAN DEREN, ANDREW BRAY, Basking Ridge. Rutgers University Library has an account book of this tanner, extending from 1824 to 1838. Probably a successor to Wm. Van Deren, 1821.

1825. ALLEN, WM. R., Burlington, around 1850 introduced, according to Schermerhorn, the first steam engine into the city of Burlington to supply power for grinding bark for tanning purposes. His tanyard was on the east side of Wood Street, north of West Union Street. Mr. Allen was mayor of Burlington for 16 years (1842-1850; 1852-1860). The engine was originally a traction locomotive that was used over the turnpike from Philadelphia to Pittsburgh. The wheel tires were 16 inches broad and arranged with cogs so that the engine easily climbed the Allegheny Mountains. It hauled tons of freight over the 600 miles. It was finally taken to Philadelphia, dismantled, and operated in a stone yard where Mr. Allen located it. It was brought to Burlington by Mr. Allen and John Broomhead, an apprentice in his tannery at that time. It remained in operation for about 15 years. (Schermerhorn.) In "The New Jersey Mirror" for May 7, 1825 and in later issues, Mr. Allen advertised for bark.

1825. COLES, JAMES, Springfield, advertised for 100 cords of tanners' bark to be delivered at the tanyard formerly occupied by Jonas Wade, deceased.

1825. CRANE, HARRY, Parker Street, Paterson. Currying shop. One employee. ("Census of Paterson, 1824-32," by Rev. Samuel Fisher.)

1825. M'NEELY & SON, ROB'T, Trenton, advertised on May 14 for red oak bark for their tannery and on September 17 for a quantity of good sumac. (True Amer.)

1825. NOYES, GEORGE, Parke Street, Paterson. Tannery, four employees. ("Census of Paterson, 1824-32," by Rev. Samuel Fisher.)

1825. STOCKTON, ABRAM., Burlington, advertised for bark and offered highest cash prices. (N. J. Mirror, May 18.)

1826. ECKEL, SAMUEL, Bridgeton, Cumberland County. His tannery was on the west side of the creek. He had a leather assortment on hand and had also commenced morocco dressing. (Wash. Whig & Bridgeton Observer, July 8.)

1826. Probasco, John, Bridgeton, Cumberland County, commenced a currying business on the west side of the creek in a building adjoining the bridge. He finished leather in all its branches and sold "Spanish and Slaughter soal leather." (The Washington Whig & Bridgeton Observer and Cumberland, Cape-May and Salem Advertiser, June 24.)

1827. Clark, Job, Westfield Township, near Scotch Plains, Union County, executor of the estate of Rachel Clark, deceased, offered a valuable tanyard for sale in "The New Jersey Advocate and Middlesex and Essex Advertiser" of October 9, 1827. (Clayton.)

1827. ...., Whitehouse, Hunterdon County. Nearly 30 vats, water running through the yard, a good currying shop, 4 vats below in the beam house, a marble table above, etc., a bark mill with patent mill and stone wheel, 2 bark houses, with 40 or 50 cords of bark, etc. (Schmidt, Hubert G., "An Economic History of Hunterdon County, New Jersey." New Brunswick, 1946.)

1828. Smith, Job, Mount Holly, Burlington County. This tanyard, located on a one-acre lot on the south side of Garden Street, one-half suitable for building lots, was put up for public sale March 7, 1828. The yard contained 28 vats of different kinds, with beam, bark and mill house, with an iron mill. There was a two-story dwelling and a barn for three horses. There was a stream of water through the lot from which the vats could be filled and also a pump of good water. (N. J. Mirror, Feb. 13.) Job Smith started business in 1821. (See 1821, Field, John.)

1829. Saunders, Isaac, Moorestown, advertised for an apprentice to learn the tanning and currying business. Applicants were to apply to Isaac Saunders or to James Saunders at Woodbury. (Village Herald, May 13.) James Saunders ran a leather store in Woodbury.

1830. Dugdale, Benjamin, Camden, son-in-law of James Kaighn, established a tannery on Cooper Street below Front (on 1928 site of Esterbrook Pen Co.) In 1845 the place was used as a livery stable by Joseph Myers. (Boyer.)

1830. Smith, Adam, Weston, Franklin Township, Somerset County, had a tannery before his death in 1830. At Middlebush there was a tannery owned by Washington Barcalow. (Snell.)

1830. Stites, John M., New Providence Township, Union County. Tanner and currier, who was born September 2, 1797. (Clayton.)

1831. Potts, George S., Trenton, advertised for bark from red, black, and chestnut oak for the tanyard formerly occupied by John Potts, deceased. Cash was paid for hides, calf and sheep skins. (N. J. State Gazette, May 14.) In the January 5, 1833 issue of the same paper, George S. Potts stated that he had opened a leather store in the building formerly occupied for that purpose by John Potts, deceased. George S. Potts, also in the same issue, advertised for a journeyman tanner, one who was well qualified "for working at the beam." An apprentice was needed too. In 1850 William H. Potts was listed by Kirkbride as a tanner and currier of Trenton.

1833. Lane, George, Spottswood, Monroe Township, Middlesex County. A tannery and shoe factory operated by George Lane from 1833 to 1853. (W.P.A. Monroe Township, 1938.)

1834. Case Tannery, Hunterdon County, on "west side of Tuccaminjah Creek opposite the copper mine. Between the creek and the Davis dwelling, a house stood along the road on the bank of the creek, occupied for many years by the Case family; but now [1895] all traces of the tannery and this house have disappeared." (John W. Lequear.) Hair for mixing with mortar was sold at the tannery. ("Hunterdon County Democrat," Flemington, N. J., Nov. 28, 1957.)

1834. .... TANNERY in Hillsborough Township, Somerset County. (Snell.)

1834. MARSHALL, JOSEPH, Trenton, bought wool and sheep skins at his old stand on Second or Market Street, a few rods east of the Presbyterian Meeting House. (N. J. State Gazette, June 14.)

1834. PAXSON & CO., STACY A., Trenton, in the October 4, 1834 issue of "The New-Jersey State Gazette" advised the public that having engaged in another business, he was willing to sell or rent the tanyard which was in good order and capable of doing a large business. The supply of bark, hides and skins to the tanyard was always ample and the property would increase in value as soon as the Delaware Falls Company finished their water power. The main raceway of the water power took off a small corner of the yard, and this gave the owner a good mill site. In May, 1831 the firm of Stacy A. Paxson & Co. had a leather store in Trenton.

1834. PEASLEY, AMOS J., Berkley, Gloucester County, advertised for one or two boys, 13 to 17 years, as apprentices to the tanning business. (Village Herald, Feb. 18.)

1836. RILEY, JAMES M., Bridgeton, Cumberland County. Tanning and Currying. Also carried on a boot and shoe business. ("The West Jersey Observer," Aug. 13.)

1836. HORNOR, JOSEPH, Borough of Princeton. In the April 1, 1836 issue of the "Princeton Whig and Somerset and Middlesex Advertiser," R. E. Hornor of Princeton advertised for rent the tanyard and currying shop of Joseph Hornor, "lately deceased." The property was stated to be one of the most complete tanneries in the state. It had a large bark house and other buildings. A good stream of hydrant water supplied the yard. It was "equidistant from Philadelphia and New York" and one-half mile from the Delaware and Raritan Canal.

1836. PICKEL, MATHIAS, Frenchtown Borough, Hunterdon County, owned a tannery before 1836, at which time or thereabouts, "Robert L. Williams of New York occupied an old shop, once belonging to Pickel's tannery, where he built fan mills for cleaning grain." (Snell.)

1837. ELMER, LUCIUS Q. C., Bridgeton, offered for sale the tanyard, currier's shop, wharf and dwelling house in Bridgeton on the west side of the creek adjoining Main Street. The wharf rented for from 40 to 50 dollars yearly. There were about 1¾ acres of good land, a good two-story dwelling, a barn, and a smoke house. If not sold, it was to be rented. ("Bridgeton Chronicle," Dec. 23.)

1838. DAVIS, ENOCH J., Shiloh, carried on the tanning and currying business at Shiloh, 2½ miles from Bridgeton. He also supplied the manufacturers of harness and shoes, and sold boots and shoes. He also made waterproof boots and shoes to order. ("Bridgeton Chronicle," Sept. 15.) The advertisement stated that this tanning business was a new concern.

1838. LETSON, JOHN S., New Brunswick. Under the heading "tanning and currying" in "The Fredonian" of May 2, 1838, it is stated that John S. Letson had taken over the establishment formerly occupied by Thomas Letson and intended to keep on hand leather, etc. This advertisement ran continuously through the April, 1840 issue of the newspaper.

1839. MIDDLETON, GEORGE, Allentown, Monmouth County, established a tannery that was still operating around 1884. The buildings covered an acre of ground. The capacity of the tannery was 3,500 hides yearly. (Ellis.)

1839. STOUT, JOHN W., New Brunswick, advertised "for good, cleaned fleece wool" delivered at his tannery. (The Fredonian, July 17.)

1840. SANDS AND CHIDESTER, Stanhope, Sussex County, built a tannery about 1840. In 1854, C. J. Cottrell was the owner. In 1866, the tannery was burned. J. H. Egbert in 1867 built another that was bought by C. J. Cottrell in 1868. It was in operation in 1880, producing rough leather. (Snell.)

1846. CLARK, EPHRAIM, Westfield Township, Union County. Tanner and currier. On Springfield and Scotch Plains road. (Clayton.)

1848. TITUS, C. M., Independence Township, Warren County, built a tannery in 1848. It was still in operation around 1880. (Snell.)

1850. BRADDOCK, WILLIAM. Small tannery on south side of southwest branch of Rancocas Creek, in Medford, Burlington County. Went to ruin before or about 1850. (Woodward and Hageman.)

1850-51. In "Kirkbride's New Jersey Business Directory for 1850 and 1851," the names and addresses of 95 tanners and curriers are listed. These are distributed by counties as follows: Bergen, 1; Burlington, 7; Camden, 3; Cumberland, 2; Essex, 35 (29 in Newark and 6 elsewhere); Gloucester, 2; Hunterdon, 2; Mercer, 3; Monmouth, 5; Passaic, 3; Salem, 3; Somerset, 3; Sussex, 14; Warren, 12. It is believed that many of the persons listed for Newark in Essex County were leather dealers. The same may be true for some of the other counties.

1857. KIENZLE, JACOB, Bridgeton, before 1857 bought a tannery that stood on the east side of Fayette Street, extending northward from Kienzle's Lane. Kienzle was born in Germany where he learned the tanner's trade. (Mulford.)

1865. BABBITT, WILLIAM, Mendham, Morris County, leather manufacturer. ("Atlas of Morris Co., N. J." New York, 1868.)

1865. HOWELL, B. A., Flanders, Morris County. Tanner and farmer. ("Atlas of Morris Co., N. J." New York, 1868.)

1870. ...., Snydertown, Hunterdon County. Tannery in operation here for many years before 1876. (Snell.)

1880. HILL, JAMES, Hardwick Township, Warren County, operated a sawmill and tannery at Slabtown around 1880. (Snell.) According to George W. Cummins (Hist. Warren Co., N. J., New York, 1911), a V. Hill ran a tannery near Sand Pond.

1880. MARTIN, J. B. Independence Township, Warren County. This was a small tannery on the road to Vienna. (Snell.)

....? STOUT, JOSHUA, Kingwood Township, Hunterdon County. John W. Lequear writing in the "Hunterdon Republican" in 1870 said that Kingwood's first tannery was kept by Joshua Stout on the creek below Bull's Island on land owned then (1870) by John Hoffman. Also that much of the leather tanned by Stout was used in the neighborhood for blacksmiths' bellows, horse collars and leather aprons. (Hunt. Co. Democrat, June 15, 1957.) Kingwood Township was incorporated in 1798.

CHAPTER XIV

Concluding Remarks

By 1791 tanning, in addition to being a regular business, was still a part of household manufacturing by the family. The hides originally came from animals slaughtered for food, and tanners started their businesses where bark, preferably hemlock bark, was handy. In New Jersey, after the local supply of hides was insufficient, imported hides were used. The early tanner inherited his methods and processes. He had no scientific training. Although some large plants were using mechanical improvements in their business early in the 1800's, and although various patents were taken out for improvements in leather-making machinery and processes, no radical change took place in tanning before the Civil War.[1]

T. W. Brown, of Virginia, invented a movable bark chamber on wheels which could be moved to and from a vat and which enabled the worker to draw out and handle bark as well as hides, such handling being an important part of the tanning operation. There were also improvements in bark mills. Devices for vats also were developed for circulating the liquor around the hides or for moving the hides in the liquor, such as tanning cylinders or oscillating vats in which there were oscillating, vertical and rotary movements. The water was circulated by means of pumps, and tanks were developed for tanning in vacuo. Other improvements were designed to shorten the time needed for tanning without impairing the quality of the leather. One of these was the use of tannin in a liquid form. Hides were passed once or twice a day between rollers which squeezed out spent liquor so that the tanning ability of fresh liquor would not be hampered.[2]

Although this monograph is not concerned with modern tanning processes, it may be noted that nowadays the tanner is acquainted with the histology and chemical composition of animal skins, variations in fiber structure, etc., of which the early tanners had no accurate knowledge. Processes preliminary to tanning have been improved. Chemical agents are used. Unhairing and fleshing are done by machines. Deliming is accomplished by the use of a suitable acid. Tanning materials from various sources are utilized, instead of being confined as formerly to oak and hemlock barks, and synthetic tannages with different chemical makeups are also used. In addition to vegetable tannages, there are mineral tannages such as chrome tannage and oil tannage, the latter of which was used very early. The alum process, another mineral one, which was used early, is also still used in the making of glove leather. Methods of drying, after tanning, have been accelerated by machinery and ovens. Shaving is done by machinery. Currying is accomplished by hand stuffing, drum stuffing and dipping, and there are various methods of dyeing the leather and finishing it by rolling or hammering.[3] In other words, the manufacture of leather is now a complex industry involving chemistry, machinery, skills, special techniques, designing and research.

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[1] Clark, Victor S. *History of Manufactures.*

[2] Morfit, Campbell. *The Arts of Tanning, Currying and Leather Dressing.* Phila., 1852.

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[3] *Encyclopaedia Britannica,* Vol. 13, 1952. Article by M. C. Lamb.

THE TANNERS' CHEER

The Tanners' Cheer, which is reproduced below from "The Art of Tanning Leather" by David H. Kennedy, New York, 1857, was sung to the tune of "The Marseillaise" hymn. The author's name is unknown to us, but it could very well have been David H. Kennedy, an enthusiastic and inventive tanner.

THE TANNERS' CHEER

A word of cheer to the hearty tanner,
And a blessing on his trade;
A leather bough shall be his banner,
Over all the land displayed.

Amid the forest-giant's winding,
While far away the hunter's coil
Round the wild bull's neck is binding,
He marks the noblest for his spoil.

Work on, ye Pitmen all!
And let the hide be sound;
Work on! joy to the land
Where working-men abound!

His labor gives the world protection
In an ever changing form,
From the summer sun's reflection
And the winter's raging storm.

It guards the tread of the sturdy yeoman,
And guides his plow-horse over the mead;
It adorns the lovely foot of woman,
And reins the patriot's battle steed.

Work on, ye Curriers all!
And let the beam resound;
Work on! joy to the land
Where working-men abound!

The wit and lore of bygone ages,
His labor saves from swift decay;
It guards the Bible's holy pages,
And grasps the follies of the day.

It aids the loom's bright imitation
By turning every busy wheel;
It bears the stream to stay the conflagration,
And sheathes the warrior's flashing steel.

Work on, ye Tanners all!
And let the song go round!
Work on! joy to the land
Where working-men abound!

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